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IN THE

**Supreme Court of the United States**

OCTOBER TERM 1984

PEOPLE OF THE STATE OF ILLINOIS and  
PEOPLE OF THE STATE OF MICHIGAN,

*Petitioners,*

*v.*

CITY OF MILWAUKEE, et al.,

*Respondents.*

PEOPLE OF THE STATE OF ILLINOIS and the  
METROPOLITAN SANITARY DISTRICT OF  
GREATER CHICAGO,

*Petitioners,*

*v.*

THE SANITARY DISTRICT OF HAMMOND, et al.,

*Respondents.*

**APPENDICES TO THE PETITION FOR A WRIT  
OF CERTIORARI TO THE UNITED STATES COURT  
OF APPEALS FOR THE SEVENTH CIRCUIT**

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**APPENDICES TO THE PETITION FOR A WRIT  
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OF APPEALS FOR THE SEVENTH CIRCUIT**

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A-1

**APPENDIX A**

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IN THE  
UNITED STATES COURT OF APPEALS  
FOR THE SEVENTH CIRCUIT

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No. 77-2246

PEOPLE OF THE STATE OF ILLINOIS,

*Plaintiff-Appellee,*

*and*

PEOPLE OF THE STATE OF MICHIGAN,

*Intervening Plaintiff-Appellee,*

*v.*

CITY OF MILWAUKEE, THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendants-Appellants.*

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Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.

No. 72 C 1253—John F. Grady, Judge.

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Upon Remand from the United States Supreme Court  
No. 79-408

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(Caption continued on following page)

No. 81-2236

WILLIAM J. SCOTT, on his own behalf and on behalf of all persons similarly situated,

*Plaintiff,*

*v.*

CITY OF HAMMOND, INDIANA; UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; DOUGLAS M. COSTLE, Administrator of the United States Environmental Protection Agency; and the HAMMOND-MUNSTER SANITARY DISTRICT,

*Defendants,*

*and*

PEOPLE OF THE STATE OF ILLINOIS and the METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, a municipal corporation,

*Plaintiffs,*

*v.*

THE SANITARY DISTRICT OF HAMMOND, a municipal corporation; JOSEPH A. PERRY; THOMAS C. CONLEY; GILBERT DE LANCY; THEODORE DUNAJESKI; and the CITY OF HAMMOND, INDIANA, a municipal corporation,

*Defendants.*

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Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.  
Nos. 80 C 4563 and 80 C 4775—John Powers Crowley, Judge.

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ARGUED DECEMBER 3, 1981—DECIDED MARCH 27, 1984

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Before SPRECHER, *Circuit Judge*,\* CUDAHY, *Circuit Judge*, and FAIRCHILD, *Senior Circuit Judge*.

FAIRCHILD, *Senior Circuit Judge*. These appeals involve resort by a state (in one case by a citizen of that state) to state law nuisance remedies to deal with pollution of its portion of an interstate body of water, resulting from the discharge of pollutants in another state. <sup>1</sup>

Appeal No. 77-2246 (the *Milwaukee* case) is here on remand from the Supreme Court of the United States. *Milwaukee v. Illinois*, 451 U.S. 304 (1981) (*Milwaukee II*). Appeal No. 81-2236 is an interlocutory appeal in cases to which we shall refer as the Hammond Cases.

### I. THE MILWAUKEE CASE

In *Illinois v. City of Milwaukee*, 406 U.S. 91 (1972) (*Milwaukee I*), the Supreme Court denied Illinois leave to file a bill of complaint under the Court's original jurisdiction. Illinois alleged pollution of Lake Michigan by the present defendants and other Wisconsin cities, and sought abatement of a public nuisance. The Court held that the federal common law of nuisance would govern, and that a district court would have federal question jurisdiction. Although an "original suit normally might be the appropriate vehicle for resolving this controversy, we exercise our discretion to remit the parties to an appropriate district court whose powers are adequate to resolve the issues." 406 U.S. at 108.

In May, 1972, a month after *Milwaukee I*, Illinois brought this action in the United States District Court for the Northern District of Illinois. One count claimed a public nuisance and invoked federal law, citing *Milwaukee I*; one claimed a violation of an Illinois statute, the Environmental Protection Act; and one claimed a

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\* Circuit Judge Robert A. Sprecher heard oral argument and voted at the post-argument conference to affirm. He died on May 15, 1982, before the preparation of this opinion.

public nuisance under Illinois common law. An injunction was sought. The State of Michigan was granted leave to intervene as a party plaintiff in August, 1972.

In August, 1977, after trial, the district court made findings that defendants dump substantial quantities of pathogen-containing sewage into Lake Michigan each year, that the lake currents carry the pathogens into Illinois waters where they may infect drinking water supplies and pose a danger to swimmers, and that the phosphorous in the discharges made a substantial contribution to the accelerated eutrophication of Lake Michigan. *People of the State of Illinois v. City of Milwaukee*, 599 F.2d 151, 167-69 (7th Cir. 1979), (*Milwaukee 7th Cir.*). Injunctive relief, including changes in the operation of defendant's sewage system, was granted. 599 F.2d at 169-70.

The district judge stated his belief that he had jurisdiction to try all three counts.

I have concluded that the case should be decided under the Federal common law of nuisance, but I further believe that the elements required under that cause of action are also the same elements which the Court would have to find under the two State claims. Therefore, in my view, it makes no practical difference that the court is taking the case on all three counts.

On appeal, this court noted,

[p]laintiff also relies on Illinois statutory and common law. The district court indicated that under any of the asserted grounds for relief the result would be the same. But it is federal common law and not state statutory or common law that controls in this case. *Illinois v. Milwaukee*, *supra*, 406 U.S. at 107 & n.9, 92 S.Ct. 1385, and therefore we do not address the state law claims.

599 F.2d 151, 177, n.53 (*Milwaukee 7th Cir.*).

In affirming as to liability and portions of the relief, we held that the federal common law of nuisance had not



been preempted by 1972 FWPCA, the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1251, *et seq.* (nor the 1977 Amendments to the same Act).

The Supreme Court granted Milwaukee's petition for *certiorari*, 445 U.S. 926, "to consider the effect of [the 1972] legislation on the previously recognized cause of action." 451 U.S. at 308. The Court concluded that Congress had so completely occupied the field as to supplant federal common law. "[T]here is no basis for a federal court to impose more stringent limitations . . . by reference to federal common law. . . ." *Milwaukee v. Illinois*, 451 U.S. 304, 320 (1981) (*Milwaukee II*). The Court vacated the judgment of this court and remanded "for proceedings consistent with this opinion."

Illinois had also applied for *certiorari*, including as one of its questions, "(3) Was appellate court correct in disregarding claims made by Illinois under Illinois law, both under state common law of nuisance and under Illinois Environmental Protection Act?" 48 L.W. 3341. In *Milwaukee II*, decided April 28, 1981, the Court noted:

The complaint also sought relief, in counts II and III, under Illinois statutory and common law. See App. 29-32. The District Court stated that "the case should be decided under the principles of the federal common law of nuisance," App. to Pet. for Cert. F-2, but went on to find liability on all three counts of the complaint, *id.* at F-24. The Court of Appeals ruled that "it is federal common law and not state statutory or common law that controls in this case, *Illinois v. Milwaukee*, *supra*, 406 U.S., at 107, & n.9, . . . and therefore we do not address the state law claims." 599 F.2d at 177, n.53. Although respondent Illinois argues this point in its brief, the issue before us is simply whether federal legislation has supplanted federal common law. The question whether state law is also available is the subject of Illinois' petition for *certiorari*, No. 79-571.

451 U.S. 304, 310, n.4.

On May 18, 1981, the Court denied the Illinois petition. 451 U.S. 982.

On remand, Illinois again asks us to affirm, this time on the basis of the state law claims. Our jurisdiction to consider the state law claims is at least unclear. It is clear that the Supreme Court refused to review our declining to consider state law as support for the district court judgment and at least doubtful that the direction to us on remand includes our reconsideration of that issue.

But even if our considering Illinois law nuisance or statutory claims in No. 77-2246, the Milwaukee case, is thus foreclosed, very similar claims are present in the Hammond cases, and any limitation on our consideration of state law claims which arises from the procedural posture of No. 77-2246 would not apply in No. 81-2236.

## II. THE HAMMOND CASES

### A. *The Scott Complaint*

On August 21, 1980, William J. Scott, suing as a citizen of Illinois, commenced a class action in the United States District Court for the Northern District of Illinois. The complaint alleged that two Indiana municipal corporations, the Hammond Sanitary District and the City of Hammond, had discharged raw and inadequately treated sewage into Lake Michigan, that the sewage created a public health hazard in Illinois, and that the Indiana municipal corporations' conduct "constitutes both a public and private nuisance under Illinois law and independently both a public and private nuisance under federal common law." Scott's complaint alleged federal jurisdiction based on both diversity of citizenship and the existence of a federal question under the federal common law of nuisance.

### B. *The Illinois Complaint*

On September 5, 1980, Illinois and the Metropolitan Sanitary District of Greater Chicago (collectively "Illinois") filed a complaint in the Circuit Court of Cook County,

Illinois, against the City of Hammond, the Hammond Sanitary District, and the District's manager and trustees (collectively "Hammond"). In addition to the federal common law and state common law nuisance claims asserted in Scott's federal complaint, the Illinois complaint alleged a trespass under Illinois common law, a violation of the Illinois Pollution Control Board's water quality standards, and a violation of Illinois Environmental Protection Act. On the petition of Hammond, the case was removed to federal court on the ground that the federal common law of nuisance provided federal question jurisdiction and that pendent jurisdiction existed over the state law claims. On October 20, 1980, the District Court denied the plaintiffs' motion to remand the case to the state court. *Illinois v. Sanitary District of Hammond*, 498 F. Supp. 166 (N.D. Ill. 1980).

On June 24, 1981, based upon *Milwaukee II*, the district court granted Hammond's motions to dismiss the federal common law nuisance claims. The district court denied dismissal of plaintiffs' state law claims, but certified its ruling for an interlocutory appeal under 28 U.S.C. § 1292(b). *Scott v. City of Hammond*, 519 F. Supp. 292, 298 (N.D. Ill. 1981). We permitted the appeal.

Illinois argues for affirmance.

### III. JURISDICTION

In the Milwaukee case, Illinois stated a claim under the federal common law of nuisance and invoked federal question jurisdiction, consistent with *Milwaukee I*. The case was begun before enactment of 1972 FWPCA. Plaintiffs in the Hammond cases stated similar claims. Although these cases came to the federal court after enactment of 1972 FWPCA, *Milwaukee II* had not yet been decided, establishing that the federal common law had been supplanted by FWPCA. Thus in all the cases the federal claim was initially substantial, and federal question jurisdiction appropriate. In all the cases, the district court could properly and did accept and retain pendent jurisdic-

tion of state law claims. It is not essential to the retention of pendent jurisdiction that the federal issue remain alive throughout. See *Rosado v. Wyman*, 397 U.S. 397, 405 (1970).

Scott, suing the Hammond defendants as a citizen of Illinois, claimed injury in the impairment of his own regular recreational use of Lake Michigan and invoked diversity jurisdiction as to his state law claim. There could not, however, be diversity jurisdiction of the actions brought by Illinois. *Milwaukee I*, 406 U.S. at 97 n.1.

In personam jurisdiction over the municipal corporation defendants was based on service under the Illinois long arm statute, on the theory that defendants through conduct outside of Illinois were causing injury within Illinois and were therefore committing tortious acts within the state. *Milwaukee 7th Cir.*, 599 F.2d at 155, 156; *Milwaukee II*, 451 U.S. at 312, n.5.

#### IV. PREEMPTION

The issue in all of these cases is whether there is a body of federal law in the area of interstate water pollution which precludes the application of one state's common or statutory law to determine liability and afford a remedy for discharges, in particular by a municipality, within another state.

Illinois suggests that Illinois common law controlled this case until *Milwaukee I* judicially promulgated federal common law, and that since the 1972 FWPCA dissipated federal common law, Illinois law must again control. Illinois argues,

[i]n sum, even if the promulgation of federal common law in *Milwaukee I* displaced the otherwise applicable state law under the Supremacy Clause, the preemptive effect of that body of federal law dissipated upon its own demise in *Milwaukee II*. And, unless the FWPCA itself preempts the application of state law, there is nothing to prevent the states from now acting in this field.

Plaintiff-Appellee Illinois' Brief at pp. 12-13. Illinois goes on to argue that the 1972 FWPCA does not have such a preemptive effect because it does not evidence a "clear and manifest purpose" of Congress to preempt state law, and therefore state law nuisance remedies are available.

The defendants argue that *Milwaukee II* has a different effect on *Milwaukee I* and *Milwaukee 7th Cir.* They contend that the Supreme Court, in *Milwaukee I*, determined that interstate pollution disputes fall within the category of controversies touching basic interests of federalism which require the application of federal law and preclude the application of a state's laws to discharges occurring outside the state. In *Milwaukee I* the Court held that the governing federal law was federal common law. In *Milwaukee II*, federal statutory law, the 1972 FWPCA, supplanted federal common law, but continued to preclude the application of state law to out-of-state discharges, except as affirmatively permitted by the 1972 FWPCA.

The district court, in the Hammond cases, essentially took the position of the Illinois plaintiffs. The district judge denied dismissal of the plaintiffs' state law claim holding that *Milwaukee II* must be interpreted as repudiating the entire *Milwaukee 7th Cir.* opinion, including footnote 53 which stated that federal common law, not state law, is controlling, thus leaving unresolved the issue of the application of state law to discharges of alleged pollutants within another state by a municipal body of that state. The district judge then went on to find that the application of state law is not precluded by virtue of the basic interests of federalism in controlling interstate water pollution nor preempted by the 1972 FWPCA.

In *Milwaukee I*, the Supreme Court articulated a number of reasons for applying federal common law to the issue of interstate water pollution. The Court examined the federal statutes touching interstate waters, including the Federal Water Pollution Control Act as it existed prior to the 1972 Amendments. The Court held that "the Act makes clear that it is federal, not state, law that in the end controls the pollution of interstate



or navigable waters.” 406 U.S. at 102. The Court went on to hold that the statutory remedies provided by Congress did not encompass the remedy sought by Illinois and that federal common law remedies must therefore fill the gap.

*Milwaukee I*'s second reason for applying federal law was the character of the parties. It is clear, however, that the federal nature of the problem, and the basic interests of federalism do not depend on the case being a state versus state case. See note 6 of *Milwaukee I*, following. It may well be significant, however, that, except for the case in which Scott is plaintiff, these are attempts by a state to regulate municipalities of another state in the discharge of their public responsibilities.

The opinion's third reason for applying federal common law to interstate pollution disputes was that the basic interests of federalism and the federal interest in a uniform rule of decision in interstate pollution disputes required the application of federal law. The court stated, “Rights in interstate streams, like questions of boundaries, ‘have been recognized as presenting federal questions’<sup>6</sup>.” 406 U.S. at 105. In footnote 6 the Court said:

Thus, it is not only the character of the parties that requires us to apply federal law. \* \* \* As Mr. Justice Harlan indicated for the Court in *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 421-27, where there is an overriding federal interest in the need for a uniform rule of decision or where the controversy touches basic interests of federalism, we have fashioned federal common law. \* \* \* Certainly these same demands for applying federal law are present in the pollution of a body of water such as Lake Michigan, bounded, as it is, by four states.

406 U.S. at 105 n.6. The Court went on to quote from the Tenth Circuit's statement in *Texas v. Pankey*, 441 F.2d 236 (10th Cir. 1971), that:

Federal common law and not the varying common law of the individual States is, we think, entitled and necessary to be recognized as a basis for dealing in uniform standard with the environmental rights of a State against improper impairment by sources outside of its domain.

406 U.S. at 107 n.9. In deciding that federal law controlled in interstate water pollution disputes, the court overruled its position in *Ohio v. Wyandotte Chemicals Corp.*, 401 U.S. 493 (1971) that state law (of the state within which pollution caused a nuisance) controlled interstate water pollution disputes. 406 U.S. 102, n.3, as interpreted by the Court, 451 U.S. at 327, n.19.

When *Illinois v. Milwaukee* reached this court for the first time, (*Milwaukee 7th Cir.*), 599 F.2d 151, we followed the rationale of *Milwaukee I* to hold that, "[i]t is federal common law and not state statutory or common law that controls in this case." 599 F.2d at 177, n. 53.

In *City of Evansville, Indiana v. Kentucky Liquid Recycling*, 604 F.2d 1008 (7th Cir. 1979), *cert. denied*, 444 U.S. 1025 (1980) three Indiana municipal corporations brought suit to recover damages incurred because of the defendant's discharges of contaminants into the river from the State of Kentucky. The complaint alleged claims based upon both federal and state law. Relying primarily upon *Milwaukee I*, this court held that the district court had subject matter jurisdiction of plaintiffs' claim under the federal common law of interstate water pollution.

[T]here can be little doubt that the reasons the Supreme Court found compelling for declaring a federal common law of interstate water pollution are applicable here. The plaintiffs are municipal or public corporations, subdivisions of the state, that were required to spend public funds because of pollution of an interstate waterway by acts done in another state. The interests of the state in this interstate pollution dispute are implicated in the same way such interests were implicated in *Illinois v. Milwaukee*.<sup>30</sup>

In footnote 30 we said:

<sup>30</sup>Cf. *Hinderlider v. LaPlata River & Cherry Creek D. Co.*, 304 U.S. 92, 110, 58 S.Ct. 803, 82 L.Ed. 1202 (1938) (interstate water apportionment); see also *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 238, 27 S.Ct. 618, 51 L.Ed. 1038 (1907) (implicitly assuming that even a private party might file suit to enjoin interstate air pollution); *Committee for Jones Falls Sewage System v. Train, supra*, 539 F.2d at 1009 n.8. Originating in Pennsylvania, the Ohio River is the boundary between Ohio and West Virginia, Ohio and Kentucky, Indiana and Kentucky, and Illinois and Kentucky, and empties into the Mississippi River. *Each of these states has an interest in the use of the river, but the laws of one state cannot control the use of the river by citizens of other states. See Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 427, 84 S.Ct. 923, 939, 11 L.Ed.2d 804 (1964) (*Hinderlider* "implies that no State can undermine the federal interest in equitably apportioned interstate waters even if it deals with private parties").

(Emphasis added.) 604 F.2d at 1018.

In *Milwaukee II* the issue before the Supreme Court was solely whether federal legislation had supplanted federal common law. The case did not address the holding in *Illinois v. Milwaukee 7th Cir.* that state law was inapplicable to interstate water pollution disputes.

The Court of Appeals ruled that "it is federal common law and not state statutory or common law that controls in this case, *Illinois v. Milwaukee, supra*, 406 U.S., at 107, & n. 9, . . . and therefore we do not address the state law claims." 599 F.2d, at 177, n. 53. Although respondent Illinois argues this point in its brief, the issue before us is simply whether federal legislation has supplanted federal common law. The question whether state law is also available is the subject of Illinois' petition for certiorari, No. 79-571.



451 U.S. at 310, n.4. In addition, the Court specifically reaffirmed its prior overruling in *Milwaukee I* of the position in *Ohio v. Wyandotte Chemicals Corp.* that state law controlled interstate water pollution disputes. 451 U.S. at 327, n.19.<sup>1</sup> Thus, when the Court vacated and remanded the case to the Seventh Circuit, it had dealt only with what federal law applied and did not affect this court's holding that Illinois law was inapplicable. See *People of the State of Illinois v. Lever Brothers Company*, 530 F. Supp. 293, 295 (N.D. Illinois 1981).

The Supreme Court continues to cite *Milwaukee I* for the inapplicability of state law to interstate conflicts implicating conflicting state interests despite the displacement of federal common law by FWPCA recognized in *Milwaukee II*. In *Texas Industries, Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630 (1981), the Supreme Court again articulated the federal nature of interstate water pollution disputes:

[A]bsent some congressional authorization to formulate substantive rules of decision, federal common law exists only in such narrow areas as those concerned with the rights and obligations of the United States, [footnote omitted] *interstate* and *international disputes implicating the conflicting rights of States*

<sup>1</sup> In addition to *Ohio v. Wyandotte Chemicals Corp.*, plaintiffs rely on *Askew v. American Waterways Operators*, 411 U.S. 325 (1973), and *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440 (1962), to establish a state's power to control pollution of its boundary waters, but the reliance is misplaced. In *Askew* the Supreme Court upheld Florida's power to impose liability for oil spills occurring *within* its own territorial waters. Nothing in the opinion indicates that Florida would have been able to extend that power to spills occurring in the territorial waters of other states. Similarly, nothing in *Huron Portland Cement* suggests that Detroit could have enforced its air pollution laws against ships outside of Michigan waters. Illinois remains free to regulate pollution of Lake Michigan from sources within Illinois, but it may not extend that regulatory authority to sources beyond its own borders.

or our relations with foreign nations,<sup>13</sup> and admiralty cases [footnotes omitted]. In these instances, our federal system does not permit the controversy to be resolved under state law, either because the authority and duties of the United States as sovereign are intimately involved or because *the interstate or international nature of the controversy makes it inappropriate for state law to control*.

- 451 U.S. at 641 (emphasis added). Footnote 13 said, See, e.g., *Illinois v. Milwaukee*, 406 U.S. 91 (1972); *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398 (1964); *Hinderlinder v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938). Many of these cases arise from interstate water disputes. Such cases do not directly involve state boundaries, disputes over which more often come to this Court under our original jurisdiction; they nonetheless involve especial federal concerns to which federal common law applies. In *Hinderlinder v. La Plata River & Cherry Creek Ditch Co.*, *supra*, at 110, decided the same day as *Erie*, the Court observed:

“Jurisdiction over controversies concerning rights in interstate streams is not different from those concerning boundaries. These have been recognized as presenting federal questions.”

- 451 U.S. at 641.

In its opinion in the Hammond cases, the district court held that,

“[t]he issue of regulating and preventing water pollution does not present the same type of unresolvable conflict of state interests that the apportionment of boundaries and water rights does. In the latter situations, a limited quantity of land or water must be divided among competing state interests. Thus, only resort to federal law and authority can resolve those matters. In the water pollution control field, however, the issue is not dividing the pie but determining

which standards will regulate discharges and provide remedies for injuries. It is theoretically possible that no conflicts will occur among the states because they agree on standards and remedies needed to protect the water. But in the more realistic situation where one or the other set of rules must be recognized as controlling, to adopt the more stringent laws does not deprive the other state of any water rights. Indeed, the benefits of stronger controls would redound to all states involved.

This interpretation misstates the nature of interstate water pollution disputes. The issue is in fact "dividing the pie," i.e., the equitable reconciliation of competing uses of an interstate body of water, Lake Michigan. The discharge of effluents into interstate waters as a consequence of sewage treatment is a use of the lake, as is its use for drinking water or recreation. To the extent that those and other uses impinge upon or compete with one another, the limited resource of Lake Michigan must be equitably apportioned among them. Such apportionment will doubtless reflect a policy that some uses are more socially desirable than others, but the policy must be articulated and implemented through legislative or judicial action. When this competition for the use of an interstate body of water involves the interests of different states, apportionment among users is a matter of special federal concern and the subject of federal law. *Texas Industries, Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 641 n.13 (1981); *Illinois v. Milwaukee*, 406 U.S. 91, 105 (1972); *Texas v. Pankey*, 441 F.2d 236, 241-42 (10th Cir. 1971); *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92, 110 (1938); *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907).

Effluent limitations on discharges into Lake Michigan prescribed in permits under the authority of 1972 FWPCA accomplish apportionment of the uses of Lake Michigan under federal law, albeit statutory rather than common law. To allow one state to impose more stringent limitations on discharges within a second state would impair

this apportionment of water use to the latter state. To argue that all states have an interest in abating water pollution and therefore the interstate application of one state's more stringent standards would benefit all is too simplistic. There are legitimate state concerns on both sides of the question. In the present cases the political subdivisions of one state claim a right to an extent of use of interstate water in the exercise of their public health functions. A different state complains that a use to that extent causes contamination of its waters and is inimical to public health because those waters are used for water supplies and recreation. This is a controversy of federal dimensions, implicating the conflicting rights of states and inappropriate for state law resolution. The latter state does not seek mere enforcement of effluent limitations established under federal law, but imposition of more stringent limitations.

The very reasons the Court gave for resorting to federal common law in *Milwaukee I* are the same reasons why the state claiming injury cannot apply its own state law to out-of-state discharges now. *Milwaukee II* did nothing to undermine that result.<sup>2</sup> The claimed pollution of inter-

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<sup>2</sup> Our decision here is limited to the choice of applicable law in interstate water pollution litigation within the United States. We do not address other dimensions of the complex legal issues that may be presented in transboundary pollution cases brought in the domestic courts of the state of discharge or the state of impact. See, e.g., *Michie v. Great Lakes Steel Division, National Steel Corp.*, 495 F.2d 213, 215 (6th Cir.) (application of law of state of discharge to international pollution dispute), *cert. denied*, 419 U.S. 997 (1974); *Sierra Club v. Adams*, 578 F.2d 389, 391 n.14 (D.C. Cir. 1978) (application of United States law to federal government actions abroad affecting environment). See also *Ohio v. Wyandotte Chemicals Corp.*, 401 U.S. 493, 502-03 (1971) (involvement of many state, interstate and international agencies in water pollution dispute supported Court's denial of leave to file original complaint); *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (applying federal common law to interstate air pollution dispute). In addition, nothing in our decision should preclude the application of Wisconsin or Indiana law to these discharges or limit the availability of state and federal courts in one of those states to out-of-state parties affected by discharges in that state.

state waters is a problem of uniquely federal dimensions requiring the application of uniform federal standards both to guard states against encroachment by out-of-state polluters and equitably to apportion the use of interstate waters among competing states. Given the logic of *Milwaukee I* and *Milwaukee II*, we think federal law must govern in this situation except to the extent that the 1972 FWPCA (the governing federal law created by Congress) authorizes resort to state law.<sup>3</sup>

<sup>3</sup> We recognize that in the ordinary interstate tort the Constitution does not preclude the application of one state's law to determine liability and afford a remedy for acts done in another state and producing injury within the forum state. Justice Brandeis, writing for the Court in *Young v. Masci*, 289 U.S. 253, 258-59 (1933) stated:

A person who sets in motion in one State the means by which injury is inflicted in another may, consistently with the due process clause, be made liable for that injury whether the means employed be a responsible agent or an irresponsible instrument. The cases are many in which a person acting outside the State may be held responsible according to the law of the State for injurious consequences within it. Thus, liability is commonly imposed under such circumstances for homicide, *Commonwealth v. Macloon*, 101 Mass. 1; for maintenance of a nuisance, *State v. Lord*, 16 N.H. 357, 359; for blasting operations, *Cameron v. Vandergriff*, 53 Ark. 381, 386; 13 S.W. 1092; and for negligent manufacture, *MacPherson v. Buick Motor Co.*, 217 N.Y. 382; 111 N.E. 1050.

In *State v. Lord*, an obstruction to a ditch in Maine caused the runoff of heavy rains to damage a road in New Hampshire. Other cases also recognized that an act which affects waters flowing between states performed in one state will give rise to a cause of action in another state if the effect on the water causes damage in the second state. See *Thayer v. Brooks*, 17 Ohio 489 (1848) (draining a swamp in Pennsylvania injured a mill in Ohio); *Howard v. Ingersoll*, 17 Ala. 780 (1850) (dam on river in Georgia injured mill in Alabama) *reversed on other grounds*, 54 U.S. (13 How.) 381 (1852) (jury improperly instructed on boundary; damaged mill may well have been in Georgia); *St. Louis & S. F. R. Co. v. Craig*, 10 Tex. Civ. App. 238, 31 S.W. 207 (1895) (construction in Indiana Territory redirected river currents causing injury to land in Texas). But see *Gilbert v. Moline Water Power & Manufacturing*

(Footnote continued on following page)



## V. 1972 FWPCA

The 1972 FWPCA was characterized by the Supreme Court as "an all encompassing program of water pollution regulation" whose major purpose was "to establish a *comprehensive* long-range policy for the elimination of water pollution." *Milwaukee II*, 451 U.S. at 318, *People, etc. v. Outboard Marine Corp., Inc.*, 580 F.2d 473, 477 (7th Cir. 1982). Part of that comprehensive policy involves recognizing, preserving, and protecting "the primary responsibilities and rights of states to prevent, reduce, and eliminate pollution, [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources." 33 U.S.C. § 1251(b). In addition, the Act encourages cooperative activities by the states and uniform state laws relating to the prevention, reduction, and elimination of pollution. 33 U.S.C. § 1253.

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<sup>3</sup> *continued*

Co., 19 Iowa 319 (1866) (Iowa courts cannot take cognizance of the nuisance which resulted in flooding of Iowa lands when the river dividing Illinois from Iowa was dammed between an island in Illinois and the Illinois mainland).

These cases are consistent with the general common law characterization of actions for damages to real property as local and therefore maintainable only in the state wherein the damaged land lies. *Ellenwood v. Marietta Chair Co.*, 158 U.S. 105, 107 (1895); *Livingston v. Jefferson*, 15 F. Cas. 660 (C.C.D. Va. 1811) (No. 8,411); *Wooster v. Great Falls Manufacturing Co.*, 39 Me. 246, 249 (1855) (dam across river between Maine and New Hampshire injured real estate in Maine); *Eachus v. Trustees of the Illinois & Michigan Canal*, 17 Ill. 534 (1856) (dam in Illinois injured Indiana land; suit can only be brought in Indiana); RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 87, comment a (1969). Nonetheless, we think it evident from *Milwaukee I* that this doctrine is not applicable to the determination of liability and remedy for discharges within one state by its municipalities into an interstate body of water, which by their nature implicate uniquely federal concerns. In addition, the conflict and confusion which would arise from the imposition by the second state of a more restrictive effluent standard than would be applicable under FWPCA counsels rejection of this doctrine in the present circumstances.

1972 FWPCA contemplates cooperative exercise of jurisdiction by the state within which discharges occur. For example, a state may obtain authority to administer its own permit program for discharges into navigable waters within its jurisdiction. Section 1342(b) and (c).<sup>4</sup>

There are other provisions specifically addressed to protection of the interests of a state whose waters may be affected even though the discharges under consideration occur in a different state. Thus where the Administrator

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<sup>4</sup> The Governor of each state is responsible for identifying each area within his state which has substantial water quality control problems. Where such area is located in two or more states, the Governors shall consult and cooperate. Section 1288. The federal Administrator shall modify certain requirements "with the concurrence of the State." Section 1311(g)(1), (h). The state (if appropriate) may grant certain time extensions. Section 1311(k). A state with an approved permit program may, in consultation with the Administrator, establish a compliance date where an innovative production process will be used. Section 1311(k). A state has certain primary responsibilities with respect to adopting and revising water quality standards, and making determinations and plans with respect to attainment of such standards. Section 1313. Each state is required to report on water quality of all navigable waters in such state. Section 1315. Each state may develop a procedure under state law for applying standards of performance for new sources in such state. Section 1316(c). Each state has primary responsibilities for enforcement of limitations in a permit issued by that state. Section 1319(a)(1). A state has certain powers with respect to sewage discharged from vessels into waters within such state. Section 1322(f), (3) and (4). Each state has certain responsibilities with respect to all publicly owned fresh water lakes in such state. Section 1324. The state (if appropriate) may impose different effluent limitations with respect to the thermal component of discharges. Section 1326(a). An applicant for federal license or permit shall provide a certification by the state in which the discharge originates. Section 1341(a). There are provisions for a state permit program for discharge of dredged or fill material within the state, with procedures to protect the interests of other states, the waters of which may be affected. Section 1344. It seems clear that where these provisions recognize or confer power upon a state, the reference is to the state within which the discharges under consideration occur.

issues a compliance order, he must send a copy to "other affected states" as well as the state in which the violation occurs. Section 1319(a)(4). When an application for federal license or permit is received, and the Administrator determines that the discharge may affect the quality of the waters of any other state, he must notify such other state. That state may then object, be entitled to a hearing, and obtain appropriate conditions to the license or permit. Section 1341(a)(2). A state permit program under § 1342(b) must insure that a state whose waters may be affected receive notice, an opportunity for public hearing and the right to submit recommendations, with notice to the Administrator if its recommendations are not accepted. Section 1342(b)(3) and (5). The Administrator has power to prevent issuance of the permit. Section 1342(d)(2). Section 1365 authorizes a civil action to enforce an effluent standard or limitation. The civil action may be brought against a violator (or the Administrator) by any person having an interest adversely affected, including a state. Subsection (h) authorizes a Governor to bring an action against the Administrator for failure "to enforce an effluent standard or limitation under this chapter the violation of which is occurring in another State and is causing an adverse effect on the public health or welfare in his State, or is causing a violation of any water quality requirement in his State." Subsection (c)(1) permits the action to be brought only in the judicial district in which the source is located.<sup>5</sup>

<sup>5</sup> Illinois' basic grievance is that the permits issued to Milwaukee pursuant to the Act do not impose stringent enough controls on the discharges. Nevertheless, Illinois failed to participate in the permit issuing process when the Milwaukee permits were issued. See, *Milwaukee II*, 451 U.S. at 325, 326. In light of the FWPCA's preemption of federal common law, that process seems now to be the appropriate federal forum for adjusting the competing claims of states in the environmental quality of interstate waters. Illinois' failure to participate in that process cannot now justify unilateral application of Illinois law to these discharges. If Illinois desires more stringent protection from out-of-state discharges, it must turn in the first instance to the EPA and federal law for the equitable accommodation of its interests.



Section 1370 has at times been referred to as a saving clause. It provides in subsection (1) that except as expressly provided, nothing in FWPCA shall preclude or deny the right of any state or political subdivision thereof or interstate agency to adopt or enforce a standard or limitation respecting discharges of pollutants or any requirement respecting control or abatement of pollution except that any effluent limitations, etc., may not be less stringent than those in effect under FWPCA.<sup>6</sup> In the light of the structure of FWPCA, with its emphasis upon the role of the state where the discharge in question occurs, except for provisions expressly protecting the interests of other states, and in the light of the conflict and confusion which could result from any different construction, we conclude

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<sup>6</sup> On its face it is arguable that § 1370 contemplates only legislatively or administratively prescribed state standards. The Supreme Court has suggested, however, that it may refer to effluent limitations imposed as a result of court decrees under the common law of nuisance.

In fact the Senate Report on the FWPCA Amendments of 1972 stated with respect to the saving clause:

"It should be noted, however, that the section would specifically preserve any rights or remedies under any *other* law. Thus, if damages could be shown, other remedies would remain available. Compliance with requirements under this Act would not be a defense to a common law action for pollution damages." S. Rep. No. 92-414, p. 81 (1971). (Emphasis in original.)

See also S. Rep. No. 92-451, pp. 23-24 (1971) (Report on the MPRSA) (the citizen-suit provision does not restrict or supersede "any other right to legal action which is afforded the potential litigant in any other state or the common law").

It might be argued that the phrase "any effluent standard or limitation" in § 505(e) [33 U.S.C. § 1365(e)] necessarily is a reference to the terms of the FWPCA. We, however, are unpersuaded that Congress necessarily intended this meaning. The phrase also could refer to state statutory limitations, or to "effluent limitations" imposed as a result of court decrees under the common law of nuisance.

*Middlesex County Sewerage Authority v. National Sea Clammers Association*, 453 U.S. 1, 16 n.26 (1981).

that this provision refers to the right of a state with respect to discharges within that state, and not to any right of a state to impose more stringent limitations upon discharges in another state.

Section 1370(2) requires that except as expressly provided nothing in FWPCA shall be construed as impairing or in any manner affecting any right or jurisdiction of the states with respect to the waters (including boundary waters) of such states. Illinois suggests that because the discharges in Wisconsin and Indiana cause an adverse effect within the boundary waters of Illinois, this provision saves its jurisdiction to apply its laws so as to regulate activity in Wisconsin and Indiana in order to avoid the effect in the future. We read *Milwaukee I* as holding that Illinois law could not be used in this situation so that there was no right or jurisdiction to be saved. In any event, in the light of the structure of FWPCA and the potential conflict and confusion, we think Congress intended no more than to save the right and jurisdiction of a state to regulate activity occurring within the confines of its boundary waters.<sup>7</sup>

Subsection (e) of § 1365, authorizing a suit for enforcement in the federal judicial district in which the source is located, contains similar saving clause language:

Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a State agency).

<sup>7</sup> Under this interpretation, § 1370(2) is not reduced to a nullity. The provision ensures that states retain their power to regulate discharges within their "waters (including boundary waters)." See *supra* n.1.

The Supreme Court concluded this

subsection is common language accompanying citizen-suit provisions and . . . means only that the provision of such suit does not revoke other remedies. It most assuredly cannot be read to mean that the Act as a whole does not supplant formerly available federal common-law actions but only that the particular section authorizing citizen suits does not do so.

*Milwaukee II*, 451 U.S. at 329.

This provision may well preserve a right under statutes or the common law of the state within which a discharge occurs (State I) to obtain enforcement of prescribed standards or limitations, and we see no reason why such a right could not be asserted by an out-of-state plaintiff injured as a result of the violation. However, it seems implausible that Congress meant to preserve or confer any right of the state claiming injury (State II) or its citizens to seek enforcement of limitations on discharges in State I by applying the statutes or common law of State II. Such a complex scheme of interstate regulation would undermine the uniformity and state cooperation envisioned by the Act. For a number of different states to have independent and plenary regulatory authority over a single discharge would lead to chaotic confrontation between sovereign states. Dischargers would be forced to meet not only the statutory limitations of all states potentially affected by their discharges but also the common law standards developed through case law of those states. It would be virtually impossible to predict the standard for a lawful discharge into an interstate body of water. Any permit issued under the Act would be rendered meaningless. In our opinion Congress could not have intended such a result.

There is nothing to suggest that the actions before us were brought to seek enforcement of an effluent standard or limitation. In any event we think that the reference in § 1365(e) to statute or common law, like the reference to right or jurisdiction of a state in § 1370, is to a statute

or the common law of the state in which the discharge occurs.<sup>8</sup>

## VI. CONCLUSION

### A. *Milwaukee Case*

Illinois asks us to affirm the district court judgment on the basis of the Illinois state law claims. It has not sought to enforce an effluent limitation under Wisconsin statutory or common law nor sought to enforce federal limitations as provided for under the 1972 FWPCA. Because we hold that the logic of *Milwaukee I* and *Milwaukee II* and the 1972 FWPCA preclude the type of application of state law sought by Illinois in the area of interstate water pollution, the judgment of the district court is reversed and the case remanded for dismissal.

### B. *Illinois v. Hammond*

The pleadings in this case and the *Scott* case make it clear that the causes of action asserted rely on the application of Illinois statutory and common law. Nothing in the pleadings suggests a resort to Indiana law or the 1972 FWPCA. The order of the district court is reversed and the case remanded for dismissal.

### C. *Scott v. Hammond*

There is an additional reason for dismissal of the *Scott* complaint, apart from the preclusive effect of 1972 FWPCA on a cause of action based on the Illinois law of nuisance. He has not alleged harm of a kind different

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<sup>8</sup> This construction is consistent with this court's former reading of the saving clause. In *U. S. Steel Corp. v. Train*, 556 F.2d 822, 830 (7th Cir. 1977) we said, "Congress has chosen not to preempt state regulation when the state has decided to force *its industry* to create new and more effective pollution control technology." (Emphasis added.)

from that suffered by other members of the public exercising the right common to the general public which was allegedly interfered with by defendants. RESTATEMENT (SECOND) OF TORTS § 821C (1977). The order of the district court is reversed and the case remanded for dismissal.

A true Copy:

Teste:

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*Clerk of the United States Court of  
Appeals for the Seventh Circuit*

## APPENDIX B

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### UNITED STATES COURT OF APPEALS

For the Seventh Circuit

Chicago, Illinois 60604

(DECIDED MARCH 27, 1984)

May 29, 1984

Before Hon. WALTER J. CUMMINGS, *Chief Judge*  
Hon. WILBUR F. PELL, JR., *Circuit Judge*  
Hon. WILLIAM J. BAUER, *Circuit Judge*  
Hon. HARLINGTON WOOD, JR., *Circuit Judge*  
Hon. RICHARD D. CUDAHY, *Circuit Judge*  
Hon. JESSE E. ESCHBACH, *Circuit Judge*  
Hon. JOHN L. COFFEY, *Circuit Judge*

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No. 77-2246

PEOPLE OF THE STATE OF ILLINOIS,

*Plaintiff-Appellee,*

and

PEOPLE OF THE STATE OF MICHIGAN,

*Intervening Plaintiff-Appellee,*

*v.*

CITY OF MILWAUKEE, THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendants-Appellants.*

---

Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.

No. 72 C 1253—John F. Grady, Judge.

Upon Remand from the United States Supreme Court, No. 79-408

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(Caption continued on following page)



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No. 81-2236

WILLIAM J. SCOTT, on his own behalf and on behalf of all persons similarly situated,

*Plaintiff,*

*v.*

CITY OF HAMMOND, INDIANA; UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; DOUGLAS M. COSTLE, Administrator of the United States Environmental Protection Agency; and the HAMMOND-MUNSTER SANITARY DISTRICT,

*Defendants,*

and

PEOPLE OF THE STATE OF ILLINOIS and the METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, a municipal corporation,

*Plaintiffs,*

*v.*

THE SANITARY DISTRICT OF HAMMOND, a municipal corporation; JOSEPH A. PERRY; THOMAS C. CONLEY; GILBERT DE LANCY; THEODORE DUNAJESKI; and the CITY OF HAMMOND, INDIANA, a municipal corporation,

*Defendants.*

---

Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.  
Nos. 80 C 4563 and 80 C 4775—John Powers Crowley, Judge.

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ORDER

Petitions for rehearing with suggestions of rehearing in banc have been filed in the above entitled cases. A vote of all the judges in regular active service was requested, but a majority of those participating<sup>1</sup> voted to deny re-

<sup>1</sup> Circuit Judges Posner and Flaum did not participate in the consideration or decision of these matters.

hearing in banc.<sup>2</sup> The members of the panel<sup>3</sup> voted to deny the petition for rehearing. Accordingly,

IT IS ORDERED that the petitions for rehearing are DENIED.

The petitions included requests that this court's judgment be modified so as to permit further proceedings on remand under Wisconsin and Indiana law in lieu of the dismissal this court has directed. The requests are DENIED.

IT IS FURTHER ORDERED by the panel that footnote 2 of the opinion be revised to read as follows:

<sup>2</sup> Our decision here is limited to the context of these cases, and to a holding that a remedy provided by the law of Illinois is not available herein. We do not address other dimensions of the complex legal issues that may be presented in transboundary pollution cases brought in the domestic courts of the state of discharge or the state of impact. *See, e.g., Michie v. Great Lakes Steel Division, National Steel Corp.*, 495 F.2d 213, 215 (6th Cir.) (application of law of state of discharge to international pollution dispute), *cert. denied*, 419 U.S. 997 (1974); *Sierra Club v. Adams*, 578 F.2d 389, 391 n.14 (D.C. Cir. 1978) (application of United States law to federal government actions abroad affecting environment). *See also Ohio v. Wyandotte Chemical Corp.*, 401 U.S. 493, 502-03 (1971) (involvement of many state, interstate and international agencies in water pollution dispute supported Court's denial of leave to file original complaint); *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (applying federal common law to interstate air pollution dispute). Nothing in our decision precludes the application of Wisconsin or Indiana law by state or federal courts in one of those states at the suit of out of state parties affected by discharges in that state.

<sup>2</sup> Circuit Judges Pell, Bauer, and Wood voted to grant rehearing in banc.

<sup>3</sup> Circuit Judge Cudahy and Senior Circuit Judge Fairchild.



## APPENDIX C

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Opinion by Judge Fairchild

### JUDGMENT ORDER

UNITED STATES COURT OF APPEALS

For the Seventh Circuit

Chicago, Illinois 60604

March 27, 1984

Before Hon. ROBERT A. SPRECHER, *Circuit Judge\**  
Hon. RICHARD D. CUDAHY, *Circuit Judge*  
Hon. THOMAS E. FAIRCHILD, *Senior Circuit Judge*

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No. 77-2246

PEOPLE OF THE STATE OF ILLINOIS,

*Plaintiff-Appellee,*

and

PEOPLE OF THE STATE OF MICHIGAN,

*Intervening Plaintiff-Appellee,*

*v.*

CITY OF MILWAUKEE, THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendants-Appellants.*

---

Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.

No. 72 C 1253—John F. Grady, *Judge.*

On Remand from the United States Supreme Court No. 79-408

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\* Circuit Judge Robert A. Sprecher heard oral argument and voted at the post-argument conference to affirm. He died on May 15, 1982, before the preparation of the opinion.

This cause came before the court on remand from the United States Supreme Court, and was reargued by counsel.

On consideration whereof, IT IS ORDERED AND ADJUDGED by this court that the judgment of the district court is REVERSED, and the case is REMANDED FOR DISMISSAL, in accordance with the opinion of this court filed this date.

IT IS FURTHER ORDERED that appellants, City of Milwaukee, et al., recover from Illinois and Michigan the amount of \$9,336.49 for costs allowed by the United States Supreme Court, and also recover costs on appeal in this court.

## APPENDIX D

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Opinion by Judge Fairchild

### JUDGMENT ORDER

UNITED STATES COURT OF APPEALS

For the Seventh Circuit

Chicago, Illinois 60604

March 27, 1984

Before Hon. ROBERT A. SPRECHER, *Circuit Judge*\*  
Hon. RICHARD D. CUDAHY, *Circuit Judge*  
Hon. THOMAS E. FAIRCHILD, *Senior Circuit Judge*

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No. 81-2236

WILLIAM J. SCOTT, on his own behalf and on behalf of all  
persons similarly situated,

*Plaintiff-Appellee,*

*v.*

CITY OF HAMMOND, INDIANA; UNITED STATES ENVIRON-  
MENTAL PROTECTION AGENCY; DOUGLAS M. COSTLE, Ad-  
ministrator of the United States Environmental Protection  
Agency; and the HAMMOND-MUNSTER SANITARY DISTRICT,

*Defendants-Appellants,*

(Caption continued on following page)

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\* Circuit Judge Robert A. Sprecher heard oral argument and voted at the post-argument conference to affirm. He died on May 15, 1982, before the preparation of this opinion.

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and

PEOPLE OF THE STATE OF ILLINOIS and the METROPOLITAN  
SANITARY DISTRICT OF GREATER CHICAGO, a municipal  
corporation,

*Plaintiffs-Appellees,*

*v.*

THE SANITARY DISTRICT OF HAMMOND, a municipal cor-  
poration; JOSEPH A. PERRY; THOMAS C. CONLEY; GILBERT  
DE LANCY; THEODORE DUNAJESKI; and the CITY OF  
HAMMOND, INDIANA, a municipal corporation,

*Defendants-Appellants.*

---

Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.  
Nos. 80 C 4563 and 80 C 4775—**John Powers Crowley**, *Judge*.

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This cause was heard on the record from the United  
States District Court for the Northern District of Illinois,  
and was argued by counsel.

On consideration whereof, IT IS ORDERED AND AD-  
JUDGED by this court that the order of the said District  
Court in this cause be, and the same is hereby, RE-  
VERSED, with costs, and the cause is REMANDED FOR DIS-  
MISSAL, in accordance with the opinion of this court filed  
this date.

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## APPENDIX E

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UNITED STATES COURT OF APPEALS  
For the Seventh Circuit  
Chicago, Illinois 60604

July 16, 1981

Before Hon. THOMAS E. FAIRCHILD, *Circuit Judge*  
Hon. WILBUR F. PELL, JR., *Circuit Judge*  
Hon. RICHARD D. CUDAHY, *Circuit Judge*

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WILLIAM J. SCOTT,

*Petitioner,*

Misc. No. 81-8044                      *vs.*

CITY OF HAMMOND, INDIANA, et al.,

*Respondents.*

\* \* \* \* \*

THE SANITARY DISTRICT OF HAMMOND, et al.,

*Petitioners,*

Misc. No. 81-8045                      *vs.*

PEOPLE OF THE STATE OF ILLINOIS and METROPOLITAN  
SANITARY DISTRICT OF GREATER CHICAGO,

*Respondents.*

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Petitions for permission to appeal.  
United States District Court for the Northern District  
of Illinois, Eastern Division.  
Nos. 80-C-4563 & 80-C-4775—Judge John Powers Crowley

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Upon consideration of the petitions of petitioner, William J. Scott, and of the Hammond respondents for permission to appeal under 28 U.S.C. 1292(b), and of the answers thereto of William J. Scott and respondents, People of the State of Illinois,

IT IS ORDERED that permission to appeal is GRANTED.

IT IS FURTHER ORDERED that these appeals are consolidated with each other and with *Illinois v. City of Milwaukee*, 77-2246, which is on remand from the Supreme Court. See *City of Milwaukee v. Illinois and Michigan*, ..... U.S. ...., 101 S.Ct. 1784 (1981).

IT IS FURTHER ORDERED that on or before July 23, 1981, the parties contact the Senior Staff Attorney, John L. Gubbins, for the purpose of scheduling a docketing conference pursuant to Fed.R.App.P. 33 and Circuit Rule 3.

APPENDIX F

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

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WILLIAM J. SCOTT, on his own behalf and on behalf of all  
persons similarly situated,

*Plaintiff,*

No. 80 C 4563

*v.*

CITY OF HAMMOND, INDIANA; UNITED STATES ENVIRON-  
MENTAL PROTECTION AGENCY; DOUGLAS M. COSTLE, Ad-  
ministrator of the United States Environmental Pro-  
tection Agency, HAMMOND-MUNSTER SANITARY DISTRICT,

*Defendants.*

---

PEOPLE OF THE STATE OF ILLINOIS and the METROPOLITAN  
SANITARY DISTRICT OF GREATER CHICAGO, a municipal  
corporation,

*Plaintiffs,*

No. 80 C 4775

*v.*

THE SANITARY DISTRICT OF HAMMOND, a municipal cor-  
poration; JOSEPH A. PERRY; THOMAS C. CONLEY; GILBERT  
DE LANCY; THEODORE DUNAJESKI; and the CITY OF  
HAMMOND, INDIANA, a municipal corporation,

*Defendants.*

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## MEMORANDUM OPINION AND ORDER

John Powers Crowley, District Judge

This matter comes before the court on defendants' motions to dismiss. For the reasons stated below, those motions are denied.

These two lawsuits (among others) arose from the pollution of Lake Michigan and the fouling of many Chicago public beaches last summer. Both complaints allege that the City of Hammond and the Sanitary District of Hammond (collectively, "Hammond") discharged large quantities of raw and inadequately treated sewage into Lake Michigan which was carried by the currents onto Chicago's beaches. Each complaint asserts several causes of action based upon federal common law of nuisance, Illinois common and statutory law of nuisance, Illinois common law of trespass, and Illinois statutory environmental law. In light of *City of Milwaukee v. Illinois*, .... U.S. ...., 49 U.S.L.W. 4445 (April 28, 1981) ("*Milwaukee II*"), the federal common law counts must be dismissed.<sup>1</sup> The issue presented here, then, is whether the causes of action based on Illinois law state claims for which relief may be granted against these non-Illinois defendants.

For this court, the first question presented by this issue is the effect of a Seventh Circuit decision that appears to be squarely on point in support of Hammond's position that federal law is the exclusive source of remedy for Illinois, Scott and the Metropolitan Sanitary District of Greater Chicago ("MSD"). In *City of Evansville v. Kentucky Liquid Recycling*, 604 F. 2d 1008 (7th Cir. 1979), the Indiana municipality sought damages from several Ohio defendants under state and federal laws governing discharges into waterways. Among other rulings, the court affirmed the dismissal of plaintiff's state law claims. Although the dismissal holding is unequivocal, the basis for that decision is not altogether clear. The rationale provided for the dismissal is only a quote from the court's earlier opinion in *Illinois v. City of Milwaukee*, 599 F. 2d 151, 177 n.53 (7th Cir. 1979), *vacated*, 49 U.S.L.W.



(April 28, 1981) ("*Milwaukee (7th Cir.)*"): "[I]t is federal common law and not state statutory or common law that controls in this case."<sup>2</sup>

Illinois and Scott argue separate theories contending the *Evansville* holding is no longer controlling, while Hammond, of course, submits that *Evansville* is both valid and binding. Illinois maintains that a more recent Seventh Circuit opinion than *Evansville* clarifies the issue in this Circuit. In *Illinois v. Outboard Marine Corp.*, 619 F. 2d 623 (7th Cir. 1980), the court held that Illinois can maintain a federal common law cause of action against an in-state pollution source to prevent pollution of interstate or navigable waters. Within that opinion, the court reasoned that there should be uniform federal law governing the federal tort of polluting federal waters. 619 F. 2d at 628. In a footnote reference, the court stated that the uniformity it and *Illinois v. City of Milwaukee*, 406 U.S. 91 (1972), ("*Milwaukee I*"), envisioned was a uniform floor. Therefore, a state could "undertake more stringent pollution control than that offered by federal statute or common law [under] its own statutes and common law." 619 F. 2d at 628 n. 16. Illinois argues that this language, being the most recent language of the court, supercedes *Evansville* and establishes the right to bring these state law claims here.

Scott presents an entirely different argument as to why *Evansville* is not binding on the court. His argument is premised on the assertion that because the only foundation for the *Evansville* decision is the *Milwaukee (7th Cir.)* decision, *Evansville*'s validity is dependent on the continuing validity of *Milwaukee (7th Cir.)*. *Milwaukee II* vacated and remanded *Milwaukee (7th Cir.)*. Scott's theory, then, is that the whole Seventh Circuit opinion, including footnote 53, is no longer in existence and cannot be precedent for any other decision. Therefore, Scott argues, *Evansville* is no longer valid and the issue of application of state law to out-of-state pollutants is unresolved in this Circuit.<sup>3</sup>

In response to Illinois' argument, Hammond contends that the *Outboard Marine* decision applies only to an in-state polluter, which was the case before the court. Hammond submits this limitation on *Outboard Marine* is particularly appropriate because the court never referred to *Milwaukee (7th Cir.)* or *Evansville*. In response to Scott's argument, Hammond asserts that *Milwaukee II* has a different effect on *Milwaukee (7th Cir.)*. It maintains that based on the rationale of *Milwaukee II*, i.e., federal common law has been supplanted by federal statutory law, the vacating order means the Seventh Circuit must replace the remedies it upheld under common law with permissible federal statutory remedies. All other provisions of *Milwaukee (7th Cir.)*, Hammond argues, remain valid law. Hammond further submits that this interpretation is buttressed by the Supreme Court's disposition of Illinois' cross-petition for certiorari on the issue of whether state law was available to Illinois. Hammond contends that if the Supreme Court had intended the Seventh Circuit to reconsider its decision on state law, the Court would have specifically directed reconsideration in light of *Milwaukee II* instead of simply denying certiorari at .... U.S. ...., 49 U.S.L.W. 3863 (May 18, 1981). For *Hammond*, the denial of certiorari means the Seventh Circuit's determination on state law remains the law.

Although all the parties have presented viable arguments on this somewhat knotty precedent issue, Scott's contentions are more persuasive. The denial of certiorari on Illinois' petition should not be attributed any significant meaning. Commentators and courts have continually recognized that denial of certiorari has no precedential weight. Further, as Scott suggests, the Court may have denied certiorari because it had already vacated the *Milwaukee (7th Cir.)* opinion and there was no longer a case for which to grant the petition. *Milwaukee II* must be interpreted as vacating the entire *Milwaukee (7th Cir.)* opinion, including footnote 53 which states that federal common law, not state law, is controlling. Because footnote 53 is the only rationale provided in *Evansville* for

the decision that state law claims do not apply, *Evansville* is no longer binding precedent on that issue. Therefore, an independent analysis of the question is appropriate.

Hammond contends that this issue presents a question of federal law, because the question is whether our federal system permits state substantive rights to be given extra-territorial application. The fundamental position of Hammond is that a state does not have the power to impose its law on an out-of-state discharger of wastes into an interstate body of water. Thus, Hammond disputes Illinois' initial premise that Illinois law provides a source of rights for which the *Erie* doctrine mandates Illinois law to govern. Of course, Hammond's first argument in support of its views is that the *Evansville* case conclusively established the invalidity of state claims in this case. As earlier noted though, *Evansville* provided no analysis for its conclusion. Thus, Hammond seeks support for its position in decisions from other circuits and from language in *Milwaukee I* and *II*.

In recognizing the existence of federal common law, the Court in *Milwaukee I* analogized the pollution issue to the equitable apportionment of interstate streams and establishment of state boundaries. In those areas of law, federal common law had developed because they presented federal questions. *Milwaukee I* also quoted an earlier Tenth Circuit opinion which had recognized federal common law as governing water pollution nuisances. *Milwaukee I*, 406 U.S. at 107 n. 9. That court concluded, "Federal common law and not the varying common law of the individual States is . . . entitled and necessary to be recognized as a basis for dealing in uniform standard with the environmental rights of a State against improper impairment by sources outside its domain." *Texas v. Pankey*, 441 F. 2d 236, 241-42 (10th Cir. 1971).

Hammond argues that subsequent cases applying *Milwaukee I* further support its contention that federal law is the exclusive source of rights in this case. In *Committee for the Consideration of the Jones Falls Sewage System*

*v. Train*, 539 F. 2d 1006 (4th Cir. 1976), the Fourth Circuit sitting en banc stated that "the law of the state whose citizens were subject to injuries by the interstate pollution ought not to govern the conduct of citizens and municipalities in another state. . . ." 539 F. 2d at 1008. In *Stream Pollution Control Bd. of Indiana v. United States Steel Corp.*, 512 F. 2d 1036 (7th Cir. 1975), the Seventh Circuit stated that the federal common law nuisance action raises "substantial questions which only a federal court may finally answer." 512 F. 2d at 1040.

These themes were definitively reaffirmed, Hammond contends, in *Milwaukee II*. There the Court characterized as inconsistent Illinois' argument that both federal and state nuisance law applied: "If state law can be applied, there is no need for federal common law; if common law exists, it is because state law cannot be used." ..... U.S. at ....., 49 U.S.L.W. at 4448 n. 7. Hammond submits, then, that even though federal common law is now displaced, its previous existence presupposed the inapplicability of state law. In any event, Hammond argues that the clear import of *Milwaukee II* is that the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. (FWPCA), has replaced the federal common law and the same analysis continues to apply to the relationship of FWPCA and state law.

Hammond contends the reason federal law must be the plaintiffs' exclusive source of remedy stems from two important considerations. First, because every state may have different and conflicting pollution control standards, federal law must be exclusive to establish uniformity. Second, if state law applies and plaintiffs prevail, then Illinois and its citizens can dictate to another state's municipality how it should run its sanitary district. This ultimately could have a significant impact on the city's treasury and on local officials' ability to conduct their own affairs. Cf. *McCulloch v. Maryland*, 17 U.S. 315 (1819).

As an alternative to its no state power argument, Hammond asserts that the FWPCA preempts extra-territorial application of state law. This contention is based on two

premises. First, *Milwaukee II* described the FWPCA as "occup[ying] the field through the establishment of a comprehensive regulatory program supervised by an expert administrative agency." ..... U.S. at ....., 49 U.S.L.W. at 4449. Second, Hammond submits that Congress could not have intended to permit one state to apply its laws requiring stricter standards on an out-of-state discharger and thereby negate time, effort and money expended by the federal agency and municipality or industry under the federal scheme. Hammond submits Congress therefore must have intended to preempt application of state law to out-of-state dischargers.

The plaintiffs' response to Hammond's position has many aspects. They contend that Congress, in the FWPCA, clearly expressed an intent not to preempt state law from the water pollution control field. Further, plaintiffs assert that a state's power to apply its laws to an out-of-state polluter was not ousted by federal common law of nuisance. In any event, plaintiffs submit that whatever validity that argument had dissipates with the replacement of federal common law. Therefore, plaintiffs maintain that the state law claims, basically all sounding in tort, merely present simple applications of the *Erie* doctrine, choice of law principles, and utilization of court powers under in personam jurisdiction.

In regard to preemption, plaintiffs contend Congress' intent is unequivocal. In 33 U.S.C. §1251(b) Congress stated, "It is the policy of Congress to recognize, preserve, and protect the primary responsibilities of States to prevent, reduce, and eliminate pollution. . . ." Congress also expressly recognized that states may impose and enforce more stringent standards than the federal ones. 33 U.S.C. §§1311(b)(1)(k) and 1370. Furthermore, the FWPCA also provides that it does not restrict any other right a person may have. 33 U.S.C. §1365(e). Thus, Hammond argues the FWPCA does not preempt state law.

In regard to Hammond's no state power argument, plaintiffs contend that Hammond and the cases it cites read too much from *Milwaukee I*. All the cases, they submit,



rely on and misinterpret footnotes 5 and 9 in *Milwaukee I*. Footnote 5 describes the role that state law plays in developing federal common law. The Court quoted from *Textile Workers v. Lincoln Mills*, 353 U.S. 448, 456-57 (1957), explaining that state law could be relevant and applied but only as absorbed in the federal law. *Milwaukee I*, 406 U.S. at 103 n. 5. Footnote 9 quotes from *Texas v. Pankey*, 441 F. 2d 236, 241-42 (10th Cir. 1971), where the court explained that federal law governs, but state standards may be relevant. From these footnotes, the Seventh Circuit concluded "it is federal common law and not state statutory or common law that controls. . . ." *Milwaukee (7th Cir.)*, 599 F. 2d at 177 n. 53; *Evansville*, 604 F. 2d at 1021.

Plaintiffs argue that all the courts' language indicating only federal law can resolve issues such as the one presented here merely means that a claim based on federal common law must be governed by federal law. Further, they contend that federal common law ousts state law in only two situations. First, state law is automatically ousted when state law constitutionally cannot be applied. The only situation where such a result is mandated is in cases between two sovereign states. In that event, the law of neither state can prevail and federal law must govern. On the other hand, when federal common law is not based on the constitutional inapplicability of state law but is "interstitial", ouster of state law does not automatically follow. Interstitial federal common law is developed only to fill gaps so that congressional purposes may be achieved. In that case, plaintiffs contend, state law can only be preempted if Congress clearly intends such a result. Because these lawsuits are not between sovereign states and since *Milwaukee I* developed interstitial common law, plaintiffs argue only Congress can preempt concurrent state law. This, as previously discussed, plaintiffs submit Congress clearly has not done.

Because state law is not preempted or ousted, plaintiffs contend that this case should be resolved like any other tort case. They analogize Hammond's discharge and



the resultant injury to a man shooting a gun across a state line and hitting a victim in another state. The legal framework for adjudicating their rights, plaintiffs submit, is simple and clear: 1) venue and in personam jurisdiction exist in Illinois, *cf. Milwaukee II*, ..... U.S. at ....., 49 U.S.L.W. at 4447 n. 5; 2) state law must apply, *Erie R.R. v. Tompkins*, 304 U.S. 64 (1938); 3) Illinois choice of law rules apply, *Klaxon Co. v. Stentor Mfg. Co.*, 313 U.S. 487 (1941); 4) Illinois substantive law would apply, *People ex rel Scott v. United States Steel Corp.*, 40 Ill. App. 3d 607, 352 N.E. 2d 225 (1976); 5) Illinois' choice of its own substantive law does not violate either the due process or full faith and credit clauses, *Allstate Ins. Co. v. Hague*, ..... U.S. ...., 49 U.S.L.W. 4071 (January 13, 1981); *Nevada v. Hall*, 440 U.S. 410 (1979); and 6) the state law is not preempted by federal statutory or common law.

As in other cases which must be decided after a recent Supreme Court decision changes what had been recognized as controlling law, this case presents a difficult issue which, if not actually unresolved before, is presented in a new context. This motion involves considerations at the core of our federal system of government and the appropriate divisions of power between legislatures and the courts. Although this is certainly only the first attempt at resolving these questions, the court is convinced the plaintiffs are entitled to seek relief under state law claims.

The first consideration is whether the type of claims presented here are purely federal questions to which state law cannot apply. In *Milwaukee I*, the Court held that suing a Wisconsin municipality is not the same as suing Wisconsin. Thus, neither lawsuit is between two sovereign states. Furthermore, the issue of regulating and preventing water pollution does not present the same type of unresolvable conflict of state interests that the apportionment of boundaries and water rights does. In the latter situations, a limited quantity of land or water must be divided among competing state interests. Thus, only resort to federal law and authority can resolve those matters.

In the water pollution control field, however, the issue is not dividing the pie but determining which standards will regulate discharges and provide remedies for injuries. It is theoretically possible that no conflicts will occur among the states because they agree on standards and remedies needed to protect the water. But in the more realistic situation where one or the other set of rules must be recognized as controlling, to adopt the more stringent laws does not deprive the other state of any water rights. Indeed, the benefits of stronger controls would redound to all states involved.

Of course, what the other state and its citizens would lose is the right to spend less money than it would have in protecting the water. Yet *Nevada v. Hall*, 440 U.S. 410 (1979), establishes that there is nothing in the Constitution or our federal system of government which prohibits the imposition of this loss. In that case, a sovereign state, Nevada, itself was sued by individual Californians in California state court for injuries sustained in an automobile accident. The state court refused to recognize the immunity Nevada would have in its own courts, reasoning that California law did not provide the same immunity. The California law expressed a policy of providing full compensation to injured parties, while the Nevada law reflected a different policy concern. The Supreme Court concluded that the Constitution "does not require a State to apply another State's law in violation of its own legitimate public policy." 440 U.S. at 422 (footnote omitted). Certainly a state's pollution standards reflect a legitimate public policy. If that policy can be enforced against a sovereign state, it can be against a municipality, regardless of the strain on the treasury.<sup>4</sup>

Of course, it must be recognized that the court opinions Hammond relies on seem to indicate that interstate pollution of interstate waters creates a federal question for which state law may only be used as guidelines, if at all. However, in each case, the court was addressing the contours of the federal common law. Now that there is no separate common law but only federal statutory law,

the statute must be examined to determine whether Congress intended to make these pollution control matters solely a federal question.

There can be no doubt that the FWPCA does not preempt states from enforcing stricter controls than the Federal government or in-state polluters. The statutory provisions the plaintiffs point to clearly establish the states' rights and interests in the field. Further, the courts have held that the FWPCA does not preempt state law. *E.g.*, *United States Steel Corp. v. Train*, 556 F. 2d 822, 830 (7th Cir. 1977). Additionally, there is nothing in the Act nor its legislative history that indicates a different result should be reached when considering an out-of-state polluter. Hammond's arguments concerning preemption do not withstand analysis. When the *Milwaukee II* Court described the scope of the federal legislation it did so in the context of determining whether federal legislation replaced federal common law. The Court expressly recognized that the test for that displacement was less demanding than the clear intent test for preemption of state law. *Milwaukee II*, ..... U.S. at ....., 49 U.S.L.W. at 4448-49. Hammond's argument of implied intent does not meet this test.

Having found no preemption of state law, the only remaining determination is which state law applies. Hammond has never really disputed, and there can be no dispute, that Illinois choice of law rules apply and that they would determine Illinois to be the substantive law of the case. Furthermore, because the court has in personam jurisdiction over Hammond, the relief sought is within the court's power. As plaintiffs point out, this power has been recognized since the *Salton Sea Cases*, *California Development Co. v. New Liverpool Salt Co.*, 172 F. 792 (9th Cir. 1909). Therefore, the plaintiffs' state law causes of action state claims for which relief may be granted.<sup>5</sup>

As earlier indicated, this is essentially a case of first impression involving important questions of law. Because this order concerns a controlling question of law as to

which there is substantial ground for difference of opinion, an immediate appeal will materially advance the ultimate termination of the litigation. 28 U.S.C. §1292(b). Additionally, since the identical issue is apparently before the Seventh Circuit in the Milwaukee litigation, an immediate appeal of this order would promote efficient use of the litigant's and judiciary's resources. An application for appeal, though, shall not stay proceedings in this court.

Accordingly, defendants' motions to dismiss are denied.

/s/ JOHN POWERS CROWLEY

John Powers Crowley  
United States District Judge

DATED: June 24, 1981.

<sup>1</sup> The dismissal of the federal law claim does not defeat subject matter jurisdiction here. The *Scott* case is based upon diversity jurisdiction, which remains. The *Illinois* and *Metropolitan Sanitary District* case was removed from the Circuit Court of Cook County based upon federal question jurisdiction and pendent jurisdiction exercised over the state law claims. Although the federal law claim is now dismissed, the court has discretion to retain pendent jurisdiction. *Rosado v. Wyman*, 397 U.S. 397, 404-5 (1970). Because this case has progressed for nine months in this court with two agreed orders entered and because it raises issues similar to those in *Scott* and other cases, the interests of convenience and judicial economy dictate the retention of jurisdiction.

<sup>2</sup> Illinois petitioned for certiorari on this part of *Milwaukee (7th Cir.)*, but it was denied. .... U.S. ...., 49 U.S.L.W. 3863 (May 18, 1981).

<sup>3</sup> On remand in the Seventh Circuit, Illinois will take the position that the district court had correctly applied state law against *Milwaukee*.

<sup>4</sup> The distinction that the entire tort was committed in California while this tort travels across state lines via a navigable water is immaterial. The crucial elements are that a tort injury has occurred in Illinois and that Illinois has a legitimate public policy in redressing that injury.

<sup>5</sup> Hammond initially argued (and then apparently abandoned) that plaintiff Scott could not maintain an Illinois common law nuisance. However, the Illinois Constitution, Art. XI, §2 (1970) clearly establishes his right to enforce environmental rights.

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

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WILLIAM J. SCOTT, on his own behalf and on behalf of all  
persons similarly situated,

*Plaintiff,*

No. 80 C 4563                      v.

CITY OF HAMMOND, INDIANA; UNITED STATES ENVIRON-  
MENTAL PROTECTION AGENCY; DOUGLAS M. COSTLE, Ad-  
ministrator of the United States Environmental Pro-  
tection Agency, HAMMOND-MUNSTER SANITARY DISTRICT,

*Defendants.*

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PEOPLE OF THE STATE OF ILLINOIS and the METROPOLITAN  
SANITARY DISTRICT OF GREATER CHICAGO, a municipal  
corporation,

*Plaintiffs,*

No. 80 C 4775                      v.

THE SANITARY DISTRICT OF HAMMOND, a municipal cor-  
poration; JOSEPH A. PERRY; THOMAS C. CONLEY; GILBERT  
DE LANCY; THEODORE DUNAJESKI; and the CITY OF  
HAMMOND, INDIANA, a municipal corporation,

*Defendants.*

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CERTIFICATE FOR INTERLOCUTORY APPEAL

John Powers Crowley, District Judge

I certify that the issues resolved by the Memorandum  
Opinion and Order dated June 24, 1981 involve control-  
ling questions of law as to which there is substantial

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ground for difference of opinion and that an immediate appeal from the Order may materially advance the ultimate termination of the litigation.

/s/ JOHN POWERS CROWLEY  
John Powers Crowley  
United States District Judge

DATED: June 24, 1981.



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## APPENDIX G

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SUPREME COURT OF THE UNITED STATES

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No. 79-408

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CITY OF MILWAUKEE ET AL.,

*Petitioners,*

*v.*

STATES OF ILLINOIS AND MICHIGAN.

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On Writ of Certiorari to the United States  
Court of Appeals for the Seventh Circuit.

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[April 28, 1981]

JUSTICE REHNQUIST delivered the opinion of the Court.

When this litigation was first before us we recognized the existence of a federal "common law" which could give rise to a claim for abatement of a nuisance caused by interstate water pollution. *Illinois v. Milwaukee*, 406 U.S. 91 (1972). Subsequent to our decision, Congress enacted the Federal Water Pollution Control Act Amendments of 1972. We granted certiorari to consider the effect of this legislation on the previously recognized cause of action.

### I

Petitioners, the City of Milwaukee, the Sewerage Commission of the City of Milwaukee, and the Metropolitan Sewerage Commission of the County of Milwaukee, are

municipal corporations organized under the laws of Wisconsin. Together they construct, operate, and maintain sewer facilities serving Milwaukee County, an area of some 420 square miles with a population of over one million people.<sup>1</sup> The facilities consist of a series of sewer systems and two sewage treatment plants located on the shores of Lake Michigan 25 and 39 miles from the Illinois border, respectively. The sewer systems are of both the "separated" and "combined" variety. A separated sewer system carries only sewage for treatment; a combined sewer system gathers both sewage and storm water runoff and transports them in the same conduits for treatment. On occasion, particularly after a spell of wet weather, overflows occur in the system which result in the discharge of sewage directly into Lake Michigan or tributaries leading into Lake Michigan.<sup>2</sup> The overflows occur at discrete discharge points throughout the system.

<sup>1</sup> It is the statutory responsibility of the city commission to "project, plan, construct, maintain and establish a sewerage system for the collection, transmission, and disposal of all sewage and drainage of the city." Wis. Stat. § 62.41 (1). The city commission is specifically given the authority to "plan, construct, and establish all local, district, lateral, intercepting, outfall or other sewers, and all conduits, drains and pumping or other plants, and all buildings, structures, works, apparatus, or agencies, and to lay all mains and pipes, and to create or use all such instrumentalities and means . . . as it deems expedient or necessary for carrying the sewerage system . . . into full effect." *Id.*, § 62.61 (1)(d). The county commission is responsible for the construction of sewers within the metropolitan area but outside city limits. *Id.*, § 59.96 (6)(a). The city operates some sewers within the city, although the powers of the city commission include the use and alteration, in its discretion, of "any or all existing public sewers or drains, including storm water sewers and drains, in the city." *Id.*, § 62.61 (1)(e). Any construction by the city of local or sanitary sewers is subject to the prior written approval of the city commission. *Id.*, § 62.67.

<sup>2</sup> Combined sewers are obviously more susceptible to overflows after storms because the storm water is transported in the same conduits as the sewage. Since ground water and water from storm sewers occasionally enter separated sewers, overflows in those systems are also more likely during wet weather. When the system is about to exceed its inherent capacity at given points,

Respondent Illinois complains that these discharges, as well as the inadequate treatment of sewage at the two treatment plants, constitute a threat to the health of its citizens. Pathogens, disease-causing viruses and bacteria, are allegedly discharged into the lake with the overflows and inadequately treated sewage and then transported by lake currents to Illinois waters. Illinois also alleges that nutrients in the sewage accelerate the eutrophication, or aging, of the lake.<sup>3</sup> Respondent Michigan intervened on this issue only.

Illinois' claim was first brought to this Court when Illinois sought leave to file a complaint under our original jurisdiction. *Illinois v. Milwaukee*, 406 U.S. 91 (1972). We declined to exercise original jurisdiction because the dispute was not between two States and Illinois had available an action in federal district court. The Court reasoned that federal law applied to the dispute, one between a sovereign State and political subdivisions of another State concerning pollution of interstate waters, but that the various laws which Congress had enacted "touching interstate waters" were "not necessarily the only federal remedies available." *Id.*, at 101, 103. Illinois could appeal to federal common law to abate a public nuisance in interstate or navigable waters. The Court recognized, however, that:

"It may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance. But until that time comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance by water pollution." *Id.*, at 107.

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overflow devices, either mechanical or gravity, are activated, resulting in the discharge of the effluent. See 599 F. 2d, at 167-168.

<sup>3</sup> Eutrophication is the natural process by which the nutrient concentration in a body of water gradually increases. The process is allegedly accelerated when nutrients in sewage, particularly phosphorus, are discharged into the water. See 599 F. 2d, at 169, n. 39.

On May 19, 1972, Illinois filed a complaint in the United States District Court for the Northern District of Illinois, seeking abatement, under federal common law, of the public nuisance petitioners were allegedly creating by their discharges.<sup>4</sup>

Five months later Congress, recognizing that "the Federal water pollution control program . . . has been inadequate in every vital aspect," S. Rep. No. 92-414, 92d Cong., 1st Sess., at 7, 2 A Legislative History of the Water Pollution Control Act Amendments of 1972, 1425 (hereinafter Leg. Hist.), passed the Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, 86 Stat. 816. The Amendments established a new system of regulation under which it is illegal for anyone to discharge pollutants into the Nation's waters except pursuant to a permit. §§ 301, 402; 33 U.S.C. §§ 1311, 1342. To the extent that the Environmental Protection Agency, charged with administering the Act, has promulgated regulations establishing specific effluent limitations, those limitations are incorporated as conditions of the permit. See generally *EPA v. State Water Resources Control Board*, 426 U.S. 200 (1976). Permits are issued either by the EPA or a qualifying state agency. Petitioners operated their sewer systems and discharged effluent under permits issued by the Wisconsin Department of Natural Resources (DNR),

<sup>4</sup> The complaint also sought relief, in counts II and III, under Illinois statutory and common law. See Joint App. 29-32. The District Court stated that "the case should be decided under the principles of the federal common law of nuisance," App. to Pet. for Cert. F-2, but went on to find liability on all three counts of the complaint, *id.*, at F-24. The Court of Appeals ruled that "it is federal common law and not state statutory or common law that controls this case, *Illinois v. Milwaukee*, *supra*, 406 U.S., at 107, and n. 9, and therefore we do not address the state law claims." 599 F. 2d, at 177, n. 53. Although respondent Illinois argues this point in its brief, the issue before us is simply whether federal legislation has supplanted federal common law. The question whether state law is also available is the subject of Illinois' petition for certiorari, No. 79-571.

which had duly qualified under § 402 (b) of the Act, 33 U.S.C. § 1342 (b), as a permit granting agency under the superintendence of the EPA. See *EPA v. State Water Resources Control Board*, 426 U.S., at 208. Petitioners did not fully comply with the requirements of the permits and, as contemplated by the Act, § 402 (b)(7), 33 U.S.C. § 1342 (b)(7), see Wis. Stat. § 147.29, the state agency brought enforcement action in state court. On May 25, 1977, the state court entered a judgment requiring discharges from the treatment plants to meet the effluent limitations set forth in the permits and establishing a detailed timetable for the completion of planning and additional construction to control sewage overflows.

Trial on Illinois' claim commenced on January 11, 1977. On July 29 the District Court rendered a decision finding that respondents had proved the existence of a nuisance under federal common law, both in the discharge of inadequately treated sewage from petitioners' plants and in the discharge of untreated sewage from sewer overflows. The court ordered petitioners to eliminate all overflows and to achieve specified effluent limitations on treated sewage. App. to Pet. for Cert. F-25-26. A judgment order entered on November 15 specified a construction timetable for the completion of detention facilities to eliminate overflows. Separated sewer overflows are to be completely eliminated by 1986; combined sewer overflows by 1989. The detention facilities to be constructed must be large enough to permit full treatment of water from any storm up to the largest storm on record for the Milwaukee area. *Id.*, at D. Both the aspects of the decision concerning overflows and concerning effluent limitations, with the exception of the effluent limitation for phosphorus, went considerably beyond the terms of petitioners' previously issued permits and the enforcement order of the state court.

On appeal, the Court of Appeals for the Seventh Circuit affirmed in part and reversed in part. The court ruled that the 1972 amendments had not pre-empted the federal common law of nuisance, but that "[i]n applying the fed-



eral common law of nuisance in a water pollution case, a court should not ignore the Act but should look to its policies and principles for guidance." 599 F. 2d, at 164. The court reversed the District Court insofar as the effluent limitations it imposed on treated sewage were more stringent than those in the permits and applicable EPA regulations. The order to eliminate all overflows, however, and the construction schedule designed to achieve this goal, were upheld.<sup>5</sup>

## II

Federal courts, unlike state courts, are not general common law courts and do not possess a general power to develop and apply their own rules of decision. *Erie R. Co. v. Tompkins*, 304 U.S. 64, 78 (1938); *United States v. Hudson & Goodwin*, 11 U.S. (7 Cranch) 32 (1812). The enactment of a federal rule in an area of national concern, and the decision whether to displace state law in doing so, is generally made not by the federal judiciary, purposefully insulated from democratic pressures, but by the people through their elected representatives in Congress. *Wallis v. Pan American Petroleum Corp.*, 384 U.S. 63, 68 (1966).<sup>6</sup> *Erie* recognized as much in ruling that a federal court could not generally apply a federal rule of

<sup>5</sup> The Court of Appeals also rejected petitioners' contentions that there was no *in personam* jurisdiction under the Illinois long-arm statute, that any exercise of *in personam* jurisdiction failed to meet the minimum contacts test of *International Shoe v. Washington*, 326 U.S. 310 (1945), and that venue was improper. 599 F. 2d, at 155-157. We agree that, given the existence of a federal common law claim at the commencement of the suit, prior to the enactment of the 1972 amendments, personal jurisdiction was properly exercised and venue was also proper.

<sup>6</sup> See Hart, *The Relations Between State and Federal Law*, 54 Colum. L. Rev. 489, 497 (1954) ("federal intervention has been thought of as requiring special justification, and the decision that such justification has been shown, being essentially discretionary, has belonged in most cases to Congress").



decision, despite the existence of jurisdiction, in the absence of an applicable Act of Congress.

When Congress has not spoken to a particular issue, however, and when there exists a "significant conflict between some federal policy or interest and the use of state law," *Wallis*, 384 U.S., at 68,<sup>7</sup> the Court has found it necessary, in a "few and restricted" instances. *Wheeldin v. Wheeler*, 373 U.S. 647, 651 (1963), to develop federal common law. See, e.g., *Clearfield Trust Co. v. United States*, 318 U.S. 363, 367 (1943). Nothing in this process suggests that courts are better suited to develop national policy in areas governed by federal common law than they are in other areas, or that the usual and important concerns of an appropriate division of functions between the Congress and the federal judiciary are inapplicable. See *TVA v. Hill*, 437 U.S. 153, 194 (1978); *Diamond v. Chakrabarty*, 447 U.S. 303, 317 (1980); *United States v. Gilman*, 347 U.S. 507, 511-513 (1954). We have always recognized that federal common law is "subject to the paramount authority of Congress." *New Jersey v. New York*, 283 U.S. 336, 348 (1931). It is resorted to "[i]n the absence of an applicable Act of Congress," *Clearfield Trust*, 318 U.S., at 367. And because the Court is compelled to consider federal questions "which cannot be answered from federal statutes alone," *D'Oench, Duhme & Co., Inc. v. FDIC*, 315 U.S. 447, 469 (1941) (Jackson, J., concurring). See also *Board of Commissioners v. United States*, 308 U.S. 343, 349 (1939); *United States v. Little Lake Misere Land Co.*, 412 U.S. 580, 594 (1973); *Miree v. DeKalb County*, 433 U.S. 25, 35 (1977) (BURGER, C.J., concurring). Federal common law is a "necessary expedient," *Committee for the Consideration of the Jones Falls Sewage System v. Train*, 539 F. 2d 1006, 1008 (CA4 1976) (en

<sup>7</sup> In this regard we note the inconsistency in Illinois' argument and the decision of the District Court that both federal and state nuisance law apply to this case. If state law can be applied, there is no need for federal common law; if federal common law exists, it is because state law cannot be used.

banc), and when Congress addresses a question previously governed by a decision rested on federal common law the need for such an unusual exercise of lawmaking by federal courts disappears. This was pointedly recognized in *Illinois v. Milwaukee*, itself, 406 U.S., at 107 ("new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance"), and in the lower court decision extensively relied upon in that case, *Texas v. Pankey*, 441 F. 2d 236, 241 (CA10 1971) (federal common law applies "[u]ntil the field has been made the subject of comprehensive legislation or authorized administrative standards") (quoted in *Illinois v. Milwaukee*, *supra*, at 107, n. 9).

In *Arizona v. California*, 373 U.S. 546 (1963), for example, the Court declined to apply the federal common law doctrine of equitable apportionment it had developed in dealing with interstate water disputes because Congress, in the view of a majority, had addressed the question:

"It is true that the Court has used the doctrine of equitable apportionment to decide river controversies between states. But in those cases Congress had not made any statutory apportionment. In this case, we have decided that Congress has provided its own method for allocating among the lower basin states the mainstream water to which they are entitled under the compact. Where Congress has so exercised its constitutional power over waters, courts have no power to substitute their own notions of an 'equitable apportionment' for the apportionment chosen by Congress." *Id.*, at 565-566.

In *Mobil Oil Corp. v. Higginbotham*, 436 U.S. 618 (1978), the Court refused to provide damages for "loss of society" under the general maritime law when Congress had not provided such damages in the Death on the High Seas Act:

"We realize that, because Congress has never enacted a comprehensive maritime code, admiralty

courts have often been called upon to supplement maritime statutes. The Death on the High Seas Act, however, announces Congress' considered judgment on such issues as the beneficiaries, the limitations period, contributory negligence, survival, and damages. . . . The Act does not address every issue of wrongful death law, . . . but when it does speak directly to a question, the courts are not free to 'supplement' Congress' answers so thoroughly that the Act becomes meaningless." *Id.*, at 625.

Thus the question was whether the legislative scheme "spoke directly to a question"—in that case the question of damages—not whether Congress had affirmatively proscribed the use of federal common law. Our "commitment to the separation of powers is too fundamental" to continue to rely on federal common law "by judicially decreeing what accords with 'common sense and the public weal'" when Congress has addressed the problem. *TVA v. Hill*, 437 U.S., at 195.<sup>8</sup>

<sup>8</sup> The dissent errs in labeling our approach "automatic displacement," *post*, at 28. As evident below, pp. 10-16 *infra*, the question whether a previously available federal common-law action has been displaced by federal statutory law involves an assessment of the scope of the legislation and whether the scheme established by Congress addresses the problem formerly governed by federal common law. Our "detailed review of respondents' claims," *post*, at 41, is such an assessment and not, as the dissent suggests, a consideration of whether the particular common law applied below was reasonable.

The dissent's reference to "the unique role federal common law plays in resolving disputes between one state and the citizens or government of another," *post*, at 28, does not advance its argument. Whether interstate in nature or not, if a dispute implicates "commerce among the several states" Congress is authorized to enact the substantive federal law governing the dispute. Although the Court has formulated "interstate common law," *Kansas v. Colorado*, 206 U.S. 46, 98 (1907), it has done so not because the usual separation of powers principles do not apply, but rather because interstate disputes frequently call for the application of a federal rule when Congress has not spoken. When Congress has spoken its decision controls, even in the context of interstate disputes. See *Arizona v. California*, *supra*.

Contrary to the suggestions of respondents, the appropriate analysis in determining if federal statutory law governs a question previously the subject of federal common law is not the same as that employed in deciding if federal law pre-empts state law. In considering the latter question "we start with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress." *Jones v. Rath Packing Co.*, 430 U.S. 519, 525 (1977) (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947)). While we have not hesitated to find pre-emption of state law, whether express or implied, when Congress has so indicated, see *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 157 (1978), or when enforcement of state regulations would impair "federal superintendence of the field," *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142 (1963), our analysis has included "due regard for the presuppositions of our embracing federal system, including the principle of diffusion of power not as a matter of doctrinaire localism but as a promoter of democracy." *San Diego Unions v. Garmon*, 359 U.S. 236, 243 (1959). Such concerns are not implicated in the same fashion when the question is whether federal statutory or federal common law governs and accordingly the same sort of evidence of a clear and manifest purpose is not required. Indeed, as noted, in cases such as the present "we start with the assumption" that it is for Congress, not federal courts, to articulate the appropriate standards to be applied as a matter of federal law.<sup>9</sup>

<sup>9</sup> Since the States are represented in Congress but not in the federal courts, the very concerns about displacing state law which counsel against finding pre-emption of state law in the absence of clear intent actually suggest a willingness to find congressional displacement of federal common law. Simply because the opinion in *Illinois v. Milwaukee* used the term "pre-emption," usually employed in determining if federal law displaces state law, is no reason to assume the analysis used to decide the usual federal-state question is appropriate here.

## III

We conclude that, at least so far as concerns the claims of respondents, Congress has not left the formulation of appropriate federal standards to the courts through application of often vague and indeterminate nuisance concepts and maxims of equity jurisprudence, but rather has occupied the field through the establishment of a comprehensive regulatory program supervised by an expert administrative agency. The 1972 amendments to the Federal Water Pollution Control Act were not merely another law "touching interstate waters" of the sort surveyed in *Illinois v. Milwaukee*, 406 U.S., at 101-103, and found inadequate to supplant federal common law. Rather, the amendments were viewed by Congress as a "total restructuring" and "complete rewriting" of the existing water pollution legislation considered in that case. 1 Leg. Hist. 350-351 (remarks of Chairman Blatnik of the House Committee which drafted House version of the amendments); *id.*, at 359-360 (remarks of Rep. Jones). See S. Rep. No. 92-414, at 95, 2 Leg. Hist. 1511; 2 Leg. Hist. 1271 (remarks of Chairman Randolph of the Senate Committee which drafted Senate version of amendments); see also *EPA v. State Water Resources Control Board*, 426 U.S., at 202-203.<sup>10</sup> Congress' intent in enacting the amendments was clearly to establish an all-encompassing program of water pollution regulation. *Every point source discharge*<sup>11</sup>

<sup>10</sup> The dissent considers the Water Pollution Control Act of 1948 "broad and systematic," *post*, at 31, and emphasizes that the court in *Illinois v. Milwaukee* did not view then-existing federal statutes as a barrier to the recognition of federal common law, *post*, at 30. The suggestion is that the present legislation similarly should be no barrier. This ignores Congress' view that the previous legislation was "inadequate in every vital aspect," 2 Leg. Hist. 1425, and Congress' clear intent, witnessed by the statements and citations in the text, to do something quite different with the 1972 amendments.

<sup>11</sup> "Point source" is defined in § 502 (14) of the Act, 33 U.S.C. § 1362 (14), as "any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged." There is no question that all of the discharges involved in this case are point source discharges.



is prohibited unless covered by a permit, which directly subjects the discharger to the administrative apparatus established by Congress to achieve its goals. The "major purpose" of the amendments was "to establish a *comprehensive* long-range policy for the elimination of water pollution." S. Rep. No. 92-414, at 95, 2 Leg. Hist. 151 (emphasis supplied). No Congressman's remarks on the legislation were complete without reference to the "comprehensive" nature of the amendments. A House sponsor described the bill as "the most comprehensive and far-reaching water pollution bill we have ever drafted," 1 Leg. Hist. 369 (Rep. Mizell), and Senator Randolph, Chairman of the responsible committee in the Senate, stated that "It is perhaps the most comprehensive legislation ever developed in its field. It is perhaps the most comprehensive legislation that the Congress of the United States has ever developed in this particular field of the environment." 2 Leg. Hist. 1269.<sup>12</sup> This Court was obviously correct when it described the 1972 amendments as establishing "a comprehensive program for controlling and abating water pollution." *Train v. City of New York*, 420 U.S. 35, 37 (1975).<sup>13</sup> The establishment of such a self-consciously comprehensive program by Congress, which certainly did not exist when *Illinois v. Milwaukee* was decided, strongly suggests that there is no room for courts to attempt to improve on that program with federal common law. See *Texas v. Pankey*, 441 F. 2d, at 241.<sup>14</sup>

<sup>12</sup> The most casual perusal of the legislative history demonstrates that these views on the comprehensive nature of the legislation were practically universal. See, e.g., 1 Leg. Hist. 343 (Rep. Young); *id.*, at 350 (Rep. Blatnik); *id.*, at 374 (Rep. Clausen); *id.*, at 380 (Rep. Roberts); *id.*, at 425 (Rep. Roe); *id.*, at 450 (Rep. Reuss); *id.*, at 467 (Rep. Dingell); *id.*, at 481 (Rep. Caffrey); 2 Leg. Hist. 1302 (Sen. Cooper); *id.*, at 1408 (Sen. Hart).

<sup>13</sup> The Court of Appeals itself recognized that Congress in the 1972 amendments "established a comprehensive and detailed system for the regulation and eventual elimination of pollutant discharges into the nation's waters." 599 F. 2d, at 162.

<sup>14</sup> This conclusion is not undermined by Congress' decision to permit States to establish more stringent standards, see § 510, 33



Turning to the particular claims involved in this case, the action of Congress in supplanting the federal common law is perhaps clearest when the question of effluent limitations for discharges from the two treatment plants is considered. The duly issued permits under which the city commission discharges treated sewage from the Jones Island and South Shore treatment plants incorporate, as required by the Act, see § 402 (b)(1), 33 U.S.C. § 1342 (b)(1), the specific effluent limitations established by EPA regulations pursuant to § 301 of the Act, 33 U.S.C. § 1311. Joint App. 371-394, 395-424; see 40 CFR § 133.102. There is thus no question that the problem of effluent limitations has been thoroughly addressed through the administrative scheme established by Congress, as contemplated by Congress. This being so there is no basis for a federal court to impose more stringent limitations than those imposed under the regulatory regime by reference to federal common law, as the District Court did in this case. The Court of Appeals, we believe, also erred in stating:

“Neither the minimum effluent limitations prescribed by EPA pursuant to the provisions of the Act nor the effluent limitations imposed by the Wisconsin agency under the National Discharge Elimination System limit a federal court’s authority to require compliance with more stringent limitations under the federal common law.” 599 F. 2d, at 173.

U.S.C. § 1370. While Congress recognized a role for the States, the comprehensive nature of its action suggests that it was the exclusive source of *federal* law. Cases recognizing that the comprehensive character of a federal program is an insufficient basis to find pre-emption of state law are not in point, since we are considering which branch of the Federal Government is the source of federal law, not whether that law pre-empts state law, see *supra*. Since federal courts create federal common law only as a necessary expedient when problems requiring federal answers are not addressed by federal statutory law, see 6-9, *supra*, the comprehensive character of a federal statute is quite relevant to the present question, while it would not be were the question whether state law, which of course does not depend upon the absence of an applicable act of Congress, still applied.

Federal courts lack authority to impose more stringent effluent limitations under federal common law than those imposed by the agency charged by Congress with administering this comprehensive scheme.

The overflows do not present a different case. They are point source discharges and, under the Act, are prohibited unless subject to a duly issued permit. As with the discharge of treated sewage, the overflows, through the permit procedure of the Act, are referred to expert administrative agencies for control. All three of the permits issued to petitioners explicitly address the problem of overflows. The Jones Island and South Shore permits, in addition to covering discharges from the treatment plants, also cover overflows from various lines leading to the plants. As issued on December 24, 1974, these permits require the city commission "to initiate a program leading to the elimination or control of all discharge overflow and/or bypass points in the [Jones Island or South Shore, respectively] Collector System . . . to assure attainment of all applicable Water Quality Standards." Joint App. 378-379, 416. The specific discharge points are identified. The Commission was required to submit a detailed plan to DNR designed to achieve these objectives, including alternative engineering solutions and cost estimates, file a report on an attached form for all overflows that do occur, and install monitoring devices on selected overflow discharge points and file more detailed quarterly reports on the overflows from those points. The Commission was also required to complete "facilities planning" for the combined sewer area. "The facilities planning elements include a feasibility study, cost-effectiveness analysis and environmental assessment for elimination or control of the discharges from the combined sewers." Quarterly progress reports on this planning are required. Joint App. 379. A permit issued to the city on December 18, 1974, covers discharges "from sanitary sewer cross-overs, combined sewer cross-overs and combined sewer overflows." Joint App. 425. Again the discharge points are specifically identified. As to separated sewers, the city "is required to

initiate a program leading to the elimination of the sanitary sewer cross-overs (gravity) and the electrically operated relief pumps. . . ." *Id.*, at 438. A detailed plan to achieve this objective must be submitted, again with alternative engineering solutions and cost estimates, any overflows must be reported to DNR on a specified form, and monitoring devices are required to be installed on selected points to provide more detailed quarterly reports. As to the combined sewers, the city "is required to initiate a program leading to the attainment of control of overflows from the city's combined sewer system. . . ." *Id.*, at 443. The city is required to cooperate with and assist the city commission in facilities planning for combined sewers, see 14, *supra*, submit quarterly progress reports to DNR, file reports on all discharges, and install monitoring devices on selected discharge points to provide more detailed quarterly reports "until the discharges are eliminated or controlled. *Id.*, at 444.<sup>15</sup>

<sup>15</sup> The regulatory approach of the DNR to overflows reflected in these permit conditions was not plucked out of thin air but rather followed the approach in EPA regulations, issued pursuant to the Act, governing the availability of federal funds for treatment works construction, including construction of facilities to control sewer overflows. The regulations provide, as do the permits, for detailed evaluation of feasibility, engineering alternatives, and costs prior to the commencement of a particular construction project. See 40 CFR §§ 35.903, 35.917. The "facilities planning" referred to in the permits for control of combined sewer overflows is a term of art defined in exhaustive detail in the EPA regulations, see *id.*, §§ 35.917-35.917-9. Such facilities planning constitutes the first step in qualifying for federal financial assistance for construction projects. It was the statutorily articulated intent of Congress to make funds available, subject to certain conditions, for projects to control overflows, see §§ 201 (g)(1), 212 (2)(A), (B), 33 U.S.C. §§ 1281 (g)(1), 1292 (2)(A), (B); see also S. Rep. No. 92-414, at 40-41, 2 Leg. Hist. 1458-1459; 1 Leg. Hist. 165 (Sen. Muskie); 2 Leg. Hist. 1379 (Sen. Magnuson). We are not impressed with arguments that more in the way of immediate solutions should have been required of the dischargers when such requirements may have had the effect, under EPA regulations requiring exhaustive planning and examination of alternatives, of foreclosing recourse to funds Congress intended to be available.

The enforcement action brought by the DNR in state court resulted in a judgment requiring "[e]limination of any by-passing or overflowing which occurs within the sewerage systems under dry weather by not later than July 1, 1982." Joint App. 465. Wet weather overflows from separated sewers were to be subject to a coordinated effort by the commissions resulting in correction of the problem by July 1, 1986, pursuant to a plan submitted to the DNR. *Id.*, at 469-471. As to the combined sewer overflows, the commissions were required to accomplish an abatement project, with design work completed by July 1, 1981, and construction by July 1, 1993. Annual progress reports were required to be submitted to the DNR. *Id.*, at 471-472.

It is quite clear from the foregoing that the state agency duly authorized by the EPA to issue discharge permits under the Act has addressed the problem of overflows from petitioners' sewer system. The agency imposed the conditions it considered best suited to further the goals of the Act, and provided for detailed progress reports so that it could continually monitor the situation. Enforcement action considered appropriate by the state agency was brought, as contemplated by the Act, again specifically addressed to the overflow problem. There is no "interstice" here to be filled by federal common law: overflows are covered by the Act and have been addressed by the regulatory regime established by the Act. Although a federal court may disagree with the regulatory approach taken by the agency with responsibility for issuing permits under the Act, such disagreement alone is no basis for the creation of federal common law.<sup>16</sup>

Respondents strenuously argue that federal common law continues to be available, stressing that neither in the per-

<sup>16</sup> In light of this conclusion we need not consider petitioners' argument that, assuming the availability of a cause of action, the lower courts erred in concluding that respondents' evidence sufficed to establish the existence of a nuisance.

mits nor the enforcement order are there any effluent limitations on overflows. This argument, we think, is something of a red herring. The difference in treatment between overflows and treated effluent by the agencies is due to differences in the *nature* of the problems, *not* the extent to which the problems have been addressed.<sup>17</sup> The relevant question with overflow discharges is not, as with discharges of treated sewage, what concentration of various pollutants will be permitted. Rather, the question is what degree of control will be required in preventing overflows and ensuring that the sewage undergoes treatment. This question is answered by construction plans designed to accommodate a certain amount of sewage that would otherwise be discharged on overflow occasions. The EPA had not promulgated regulations mandating specific control guidelines because of a recognition that the problem is "site specific." See, *e.g.*, EPA Program Requirements Memorandum PRM No. 75-34:

"The costs and benefits of control of various portions of pollution due to combined sewer overflows and by-passes vary greatly with the characteristics of the sewer and treatment system, the duration, intensity, frequency, and aerial extent of precipitation, the type and extent of development in the service area, and the characteristics, uses and water quality standards of the receiving waters. Decisions on grants for control of combined sewer overflows, therefore, must be made on a case-by-case basis after detailed planning at the local level."

See also EPA, Report to Congress on Control of Combined Sewer Overflow in the United States, 7-1, 7-13

<sup>17</sup> See EPA, Benefit Analysis for Combined Sewer Overflow Control 4 (1979) ("regulations governing combined sewer overflows require permits for each outfall . . . they differ from the . . . permits for treatment plants, which specify effluent limitations based on technology or water quality standards. NPDES permits for combined sewer overflows contain no effluent limitations, though they do usually require monitoring and data collection").



(1978). Decision is made on a case-by-case basis, through the permit procedure, as was done here. Demanding specific regulations of general applicability before concluding that Congress has addressed the problem to the exclusion of federal common law asks the wrong question. The question is whether the field has been occupied, not whether it has been occupied in a particular manner.<sup>18</sup>

The invocation of federal common law by the District Court and the Court of Appeals in the face of congressional legislation supplanting it is peculiarly inappropriate in areas as complex as water pollution control. As the District Court noted:

"It is well known to all of us that the arcane subject matter of some of the expert testimony in this case was sometimes over the heads of all of us to one height or another. I would certainly be less than candid if I did not acknowledge that my grasp of some of the testimony was less complete than I would like it to be. . . ." App. to Pet. for Cert. F-4.

Not only are the technical problems difficult—doubtless the reason Congress vested authority to administer the

<sup>18</sup> The point is perhaps made most clear if one asks what inadequacy in the treatment by Congress the courts below rectified through creation of federal common law. In imposing stricter effluent limitations the District Court was not "filling a gap" in the regulatory scheme, it was simply providing a different regulatory scheme. The same is true with overflows. The District Court simply ordered planning and construction designed to achieve more stringent control of overflows than the planning and construction undertaken pursuant to the permits. The same point is evident in examining respondents' arguments. The basic complaint is that the permits issued to petitioners under the Act do not control overflows or treated discharges in a sufficiently stringent manner, not that permits under the Act cannot deal with these subjects or that the instant permits do not do so. At most respondents argue not that the Act is inadequate, as was the legislation considered in *Illinois v. Milwaukee*, but that these particular permits issued under it are. This does not suffice to create an "interstice" to be filled by federal common law.



Act in administrative agencies possessing the necessary expertise—but the general area is particularly unsuited to the approach inevitable under a regime of federal common law. Congress criticized past approaches to water pollution control as being “sporadic” and “ad hoc,” S. Rep. No. 92-414, at 95, 2 Leg. Hist. 1511, apt characterizations of any judicial approach applying federal common law, see *Wilburn v. Fireman's Insurance Co.*, 348 U.S. 310, 319 (1955).

It is also significant that Congress addressed in the 1972 amendments one of the major concerns underlying the recognition of federal law in *Illinois v. Milwaukee*. We were concerned in that case that Illinois did not have any forum in which to protect its interests unless federal common law were created. See 406 U.S., at 104, 107. In the 1972 amendments Congress provided ample opportunity for a State affected by decisions of a neighboring State's permit granting agency to seek redress. Under § 402 (b)(3), 33 U.S.C. § 1342 (b)(3), a state permit granting agency must ensure that any State whose waters may be affected by the issuance of a permit receives notice of the permit application and the opportunity to participate in a public hearing. Wisconsin law accordingly guarantees such notice and hearing, see Wis. Stat. §§ 147.11, 147.13. Respondents received notice of each of the permits involved here, and public hearings were held, but they did not participate in them in any way. Section 402 (b)(5), 33 U.S.C. § 1342 (b)(5) provides that state permit granting agencies must ensure that affected States have an opportunity to submit written recommendations concerning the permit applications to the issuing State and the EPA, and both the affected State and the EPA must receive notice and a statement of reasons if any part of the recommendations of the affected State are not accepted. Again respondents did not avail themselves of this statutory opportunity. Under § 402 (d)(2)(A), 33 U.S.C. § 1342 (d)(2)(A), the EPA may veto any permit issued by a State when waters of another State may be affected. Respondents did not request such action. Under § 402 (d)(4) of the Act, 33

U.S.C. § 1342 (d)(4), added in 1977, the EPA itself may issue permits if a stalemate between an issuing and objecting State develops. The basic grievance of respondents is that the permits issued to petitioners pursuant to the Act do not impose stringent enough controls on petitioners' discharges. The statutory scheme established by Congress provides a forum for the pursuit of such claims before expert agencies by means of the permit granting process. It would be quite inconsistent with this scheme if federal courts were in effect to "write their own ticket" under the guise of federal common law after permits have already been issued and permittees have been planning and operating in reliance on them.

Respondents argue that congressional intent to preserve the federal common law remedy recognized in *Illinois v. Milwaukee* is evident in §§ 510 and 505 (e) of the statute, 33 U.S.C. §§ 1370, 1365 (e).<sup>19</sup> Section 510 provides that nothing in the Act shall preclude States from adopting and enforcing limitations on the discharge of pollutants

<sup>19</sup> It must be noted that the legislative activity resulting in the 1972 amendments largely occurred prior to this Court's decision in *Illinois v. Milwaukee*. Drafting, filing of committee reports, and debate in both houses took place prior to the decision. Only conference activity occurred after. It is therefore difficult to argue that particular provisions were designed to preserve a federal common law remedy not yet recognized by this Court.

The dissent cites several cases for the proposition that the federal common law nuisance remedy existed "long before" *Illinois v. Milwaukee*. *Post*, at 29. During the legislative activity resulting in the 1972 amendments, however, this Court's decision in *Ohio v. Wyandotte Chemicals Corp.*, 401 U.S. 493 (1971), indicated that state common law would control a claim such as *Illinois v. Wyandotte*, like the present suit, was brought by a State to abate a pollution nuisance created by out-of-state defendants. The Court ruled that "an action such as this, if otherwise cognizable in federal district court, would have to be adjudicated under state law. *Erie R. Co. v. Tompkins*, 304 U.S. 64 (1938)." 401 U.S., at 498-499, n. 3. The Court in *Illinois v. Milwaukee* found it necessary to overrule this statement, see 406 U.S., at 102, n. 3.

more stringent than those adopted under the Act.<sup>20</sup> It is one thing, however, to say that States may adopt more stringent limitations through state administrative processes, or even that States may establish such limitations through state nuisance law, and apply them to in-state dischargers. It is quite another to say that the States may call upon *federal* courts to employ *federal* common law to establish more stringent standards applicable to out-of-state dischargers. Any standards established under federal common law are federal standards, and so the authority of States to impose more stringent standards under § 510 would not seem relevant. Section 510 clearly contemplates state authority to establish more stringent pollution limitations; nothing in it, however, suggests that this was to be done by federal court actions premised on federal common law.

Subsection 505 (e) provides:

“Nothing *in this section* shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a state agency)” (emphasis supplied).

<sup>20</sup> In full, § 510 provides:

“Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (a) any standard or limitation respecting discharges of pollutants or (b) any requirement respecting control or abatement of pollution; except that if any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such state or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.”

Respondents argue that this evinces an intent to preserve the federal common law of nuisance. We, however, are inclined to view the quoted provision as meaning what it says: that nothing in § 505, the citizen suit provision, should be read as limiting any other remedies which might exist.

Subsection 505 (e) is virtually identical to subsections in the citizen suit provisions of several environmental statutes.<sup>21</sup> The subsection is common language accompanying citizen suit provisions and we think that it means only that the provision of such suit does not revoke other remedies. It most assuredly cannot be read to mean that the Act as a whole does not supplant formerly available federal common law actions but only that the particular section authorizing citizen suits does not do so. No one, however, maintains that the citizen suit provision preempts federal common law.

We are thus not persuaded that § 505 (e) aids respondents in this case, even indulging the unlikely assumption that the reference to "common law" in § 505 (e) includes the limited *federal* common law as opposed to the more routine state common law. See *Committee for the Consideration of the Jones Falls Sewage System v. Train*, 539 F. 2d, at 1009, n. 9.<sup>22</sup>

<sup>21</sup> See, e.g., § 304 (e) of the Clean Air Act, 42 U.S.C. (Supp. II) 7604 (e); § 16 (e) of the Deep Water Port Act of 1974, 33 U.S.C. § 1515 (e); § 105 (g)(5) of the Marine Protection, Research, and Sanctuaries Act of 1972, 33 U.S.C. § 1415 (g)(5); § 12 (e) of the Noise Control Act of 1972, 42 U.S.C. § 4911 (e); § 7002 (f) of the Solid Waste Disposal Act, 42 U.S.C. § 6972 (f); § 1449 (e) of the Safe Drinking Water Act, 42 U.S.C. (Supp. II) 300j-8 (e); § 520 (e) of the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. (Supp. II) 1270 (e); and § 20 (c)(3) of the Toxic Substances Control Act, 15 U.S.C. § 2619 (c)(3).

<sup>22</sup> The dissent's criticism of our reading of § 505 (e), *post*, at 35-36, is misplaced. There is nothing unusual about Congress enacting a particular provision, and taking care that this enactment by itself not disturb other remedies, without considering whether the rest of the Act does so or what other remedies may be available. The fact that the language of § 505 (e) is repeated *in haec verba* in the citizen suit provisions of a vast array of environmental legis-

The dissent considers "particularly revealing," *post*, at 37, a colloquy involving Senators Griffin, Muskie and Hart, concerning the pendency of an action by the EPA against Reserve Mining Company. Senator Griffin expressed concern that "one provision in the conference agreement might adversely affect a number of pending law suits brought under the Refuse Act of 1899," including the Reserve Mining litigation. 1 Leg. Hist. 190. The provision which concerned Senator Griffin, enacted as § 402 (k), 33 U.S.C. § 1342 (k), provides, in pertinent part:

"Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) § 301, 306, or 402 of this Act, or (2) § 13 of the Act of March 3, 1899, unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application."

Senator Griffin was concerned about the relation between this provision and § 4 (a) of the bill, which provided that "No suit, action or other proceeding lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under the Federal Water Pollution Control Act as in effect immediately prior to the date of enactment of the Act shall abate by reason of the taking effect of the amendment

lation, see n. 21 *supra*, indicates that it does not reflect any considered judgment about what other remedies were previously available or continue to be under any particular statute. The dissent refers to our reading as "extremely strained," but the dissent, in relying on § 505 (e) as evidence of Congress' intent to preserve the federal common-law nuisance remedy, must read "nothing in this section" to mean "nothing in this Act." We prefer to read the statute as written. Congress knows how to say "nothing in this Act" when it means to, see, *e.g.*, Pub. L. 96-510, § 114 (a), 94 Stat. 2795 (1980).



made by § 2 of this Act." Senator Griffin stated that "when these provisions are read together, it is not altogether clear what effect is intended with respect to pending federal court suits against polluters violating the Refuse Act of 1899."

Senator Muskie responded to Senator Griffin's concerns by quoting § 4 (a) and stating that "Without any question it was the intent of the conferees that this provision include enforcement actions brought under the Refuse Act, the Federal Water Pollution Control Act, and any other acts of Congress." 1 Leg. Hist. 193. Later Senator Hart stated "It is my understanding, . . . after the explanation of the Senator from Maine, that the suit now pending against the Reserve Mining Co., under the Refuse Act of 1899 will in no way be affected nor will any of the other counts under the existing Federal Water Pollution Control Act or other law." 1 Leg. Hist. 211.<sup>23</sup> When Senator Muskie's and Hart's remarks are viewed in this context it is clear that they do not bear on the issue now before the Court. In the first place, although there was a federal common-law claim in the Reserve Mining litigation, Senator Griffin focused on the Refuse Act of 1899—not federal common law. Senator Muskie, with his reference to "other acts of Congress," rather clearly was not discussing federal *common* law. Most importantly, however, Senator Muskie based his response to Senator Griffin—that the Reserve Mining suit would not be affected—on a specific section of the bill, § 4 (a), which is not applicable to suits other than those brought by or against the federal government and pending when the amendments were enacted. Senator Hart based his re-

<sup>23</sup> The dissent states that "Senator Muskie and Hart each responded" as Senator Hart is quoted in the text. *Post*, at 37. This is not strictly accurate. Senator Muskie never responded as Senator Hart did, but rather as quoted in the text above, with the clear reference to § 4 (a). He did not, like Senator Hart, use the phrase "other law" but rather, and of particular significance in the present context, the phrase "*any other acts of Congress.*" This inaccuracy in the dissent appears to be of no little importance, since the dissent attaches great weight to the views of Senator Muskie, see *post*, at 37, n. 16.



sponse on the explanation given by Senator Muskie. Even if we assumed that the legislators were focusing on the federal common law aspects of the Reserve Mining litigation (and we do not think they were), Senators Muskie and Hart informed Senator Griffin that the Reserve Mining suit was not affected *because of § 4 (a)*, and not at all because the Act did not displace federal common law of nuisance. Senator Griffin's question focused on § 4 (a); understandably, so did the assurances he received. Nothing about the colloquy suggests any intent concerning the continued validity of federal common law. The issue simply did not come up because Senator Griffin's concerns were fully answered by a particular section not applicable in the case before us.<sup>24</sup>

We therefore conclude that no federal common law remedy was available to respondents in this case. The judgment of the Court of Appeals is therefore vacated, and the case remanded for proceedings consistent with this opinion.

*It is so ordered.*

<sup>24</sup> In the similar colloquy in the House, also relied upon by the dissent, Rep. Wright responded to a question from Rep. Dingell in precisely the same manner as Senator Muskie responded to Senator Griffin, relying on § 4 (a), and referring to "other acts of Congress." 1 Leg. Hist. 248. Rep. Dingell never mentioned federal common law in his question.

The dissent also relies on the failure of Congress to enact, in 1977, an amendment "proposed" by Rep. Aspin. *Post*, at 39-40. This reliance not only ignores the fact that "unsuccessful attempts at legislation are not the best guides to legislative intent," *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367, 381-382, n. 11 (1969), but also, even assuming the failure to enact the Aspin "proposal" is some indication of Congress' intent in 1977, the "oft-repeated warning" that "the views of a subsequent Congress form a hazardous basis for inferring the intent of an earlier one." *Consumer Product Safety Commission v. GTE Sylvania, Inc.*, 447 U.S. 102, 117-118 (1980). These admonitions do not even come into play, however, since the Aspin proposal was never introduced in either house of Congress; it does not even appear in the Congressional Record. The fate of the Aspin "proposal" has under our precedents dealing with statutory interpretation nothing whatever to do with Congress' intent concerning federal common law when it enacted the 1972 amendments.

SUPREME COURT OF THE UNITED STATES

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No. 79-408

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CITY OF MILWAUKEE, ET AL.,

*Petitioners,*

*v.*

STATES OF ILLINOIS AND MICHIGAN.

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On Writ of Certiorari to the United States  
Court of Appeals for the Seventh Circuit.

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[April 28, 1981]

JUSTICE BLACKMUN, with whom JUSTICE MARSHALL and JUSTICE STEVENS join, dissenting.

Nine years ago, in *Illinois v. Milwaukee*, 406 U.S. 91 (1972), this Court unanimously determined that Illinois could bring a federal common-law action against the city of Milwaukee, three other Wisconsin cities, and two sewerage commissions. At that time, Illinois alleged that the discharge of raw and untreated sewage by these Wisconsin entities into Lake Michigan created a public nuisance for the citizens of Illinois. The Court remitted the parties to an appropriate federal district court, "whose powers are adequate to resolve the issues." *Id.*, at 108.

Illinois promptly initiated the present litigation,<sup>1</sup> and pursued it through more than three years of pretrial dis-

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<sup>1</sup> This Court's decision was issued April 24, 1972. The complaint was filed in the United States District Court for the Northern District of Illinois on May 19, 1972.

covery, a six-month trial that entailed hundreds of exhibits and scores of witnesses, extensive factual findings by the District Court, App. F to Pet. for Cert., and an exhaustive review of the evidence by the Court of Appeals. 599 F. 2d 151, 167-177 (CA7 1979). Today, the Court decides that this nine-year judicial exercise has been just a meaningless charade, cf. *Hughes Tool Co. v. Trans World Airlines*, 409 U.S. 363, 389, 390 (1973) (dissenting opinion), inasmuch as, it says, the federal common law remedy approved in *Illinois v. Milwaukee* was implicitly extinguished by Congress just six months after the 1972 decision. Because I believe that Congress intended no such extinction, and surely did not contemplate the result reached by the Court today, I respectfully dissent.

## I

The Court's analysis of federal common law displacement rests, I am convinced, on a faulty assumption. In contrasting congressional displacement of the common law with federal pre-emption of state law,<sup>2</sup> the Court assumes

<sup>2</sup> I have no quarrel with the Court's distinction between the issues of federalism at stake in assessing congressional pre-emption of state law and the separation of powers concerns that are implicated here. But there is more to this distinction than the Court suggests. In deciding whether federal law pre-empts state law, the Court must be sensitive to the potential frustration of national purposes if the States are premitted to control conduct that is the subject of federal regulation. *San Diego Building Trades Council v. Garmon*, 359 U.S. 236, 244 (1959). See *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142 (1963). For this reason, in pre-emption analysis the role of federal law is often determined on an "all or nothing" basis. On the other hand, where federal interests alone are at stake, participation by the federal courts is often desirable, and indeed necessary, if federal policies developed by Congress are to be fully effectuated. See, e.g., *Miree v. DeKalb County*, 43 U.S. 25, 35 (1977) (opinion concurring in the judgment); *United States v. Little Lake Misere Land Co.*, 412 U.S. 580, 592-593 (1973). The whole concept of interstitial federal law-making suggests a cooperative interaction between courts and Congress that is less attainable where federal-state questions are involved.

that as soon as Congress "addresses a question previously governed" by federal common law, "the need for such an unusual exercise of lawmaking by federal courts disappears." *Ante*, at 8. This "automatic displacement" approach is inadequate in two respects. It fails to reflect the unique role federal common law plays in resolving disputes between one State and the citizens or government of another. In addition, it ignores this Court's frequent recognition that federal common law may contemplate congressional action in the fulfillment of federal policies.

It is well-settled that a body of federal common law has survived the decision in *Erie R. Co. v. Tompkins*, 304 U.S. 64 (1938). *Erie* made clear that federal courts, as courts of limited jurisdiction, lack general power to formulate and impose their own rules of decision. *Id.*, at 78. The Court, however, did not there upset, nor has it since disturbed, a deeply rooted, more specialized federal common law that has arisen to effectuate federal interests embodied either in the Constitution or an Act of Congress.<sup>3</sup> Chief among the federal interests served by this common law are the resolution of interstate disputes and the implementation of national statutory or regulatory policies.

Both before and after *Erie*, the Court has fashioned federal law where the interstate nature of a controversy renders inappropriate the law of either State. See, e.g., *Nebraska v. Wyoming*, 325 U.S. 589 (1945); *Hinderlider v. La Plata Co.*, 304 U.S. 92, 110 (1938); *Kansas v. Colorado*, 206 U.S. 46, 95, 97-98 (1907) (apportioning waters of interstate stream). See also *Cissna v. Tennessee*, 246

<sup>3</sup> See generally Hill, The Law-Making Power of the Federal Courts; Constitutional Preemption, 67 Colum. L. Rev. 1024, 1026-1042 (1967); Friendly, In Praise of *Erie*—and of the New Federal Common Law, 39 N.Y.U. L. Rev. 383, 405-422 (1964). See also Leypold, Federal Common Law; Judicially Established Effluent Standards as a Remedy in Federal Nuisance Actions, 7 Boston College Env. Aff. L. Rev. 293 (1978).

U.S. 289, 296 (1918); *Howard v. Ingersoll*, 13 How. 381 (1851) (resolving interstate boundary conflict). When such disputes arise, it is clear under our federal system that laws of one State cannot impose upon the sovereign rights and interests of another. The Constitution, by Art. III, § 2, explicitly extends the judicial power of the United States to controversies between a State and another State or its citizens, and this Court, in equitably resolving such disputes, has developed a body of "what may not improperly be called interstate common law." *Kansas v. Colorado*, 206 U.S., at 98.

Long before the 1972 decision in *Illinois v. Milwaukee*, federal common law enunciated by the Court assured each State the right to be free from unreasonable interference with its natural environment and resources when the interference stems from another State or its citizens. *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237-239 (1907); *Missouri v. Illinois*, 200 U.S. 496, 520, 526 (1906). See *New Jersey v. City of New York*, 283 U.S. 473 (1931); *New York v. New Jersey*, 256 U.S. 296 (1921). The right to such federal protection is a consequence of each State's entry into the Union and its commitment to the Constitution. In the words of Justice Holmes, speaking for the Court:

"When the States by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining *quasi-sovereign* interests; and the alternative to force is a suit in this court." *Georgia v. Tennessee Copper Co.*, 206 U.S., at 237.

This Court also has applied federal common law where federally created substantive rights and obligations are at stake. Thus, the Court has been called upon to pronounce common law that will fill the interstices of a pervasively federal framework, or avoid subjecting relevant federal interests to the inconsistencies in the laws of



several States. *Textile Workers v. Lincoln Mills*, 353 U.S. 448, 456-457 (1957); *United States v. Standard Oil Co.*, 332 U.S. 301, 305 (1947); *Clearfield Trust Co. v. United States*, 318 U.S. 363, 366-367 (1943); *D'Oench, Duhme & Co. v. Federal Deposit Ins. Corp.*, 315 U.S. 447 (1942). If the federal interest is sufficiently strong, federal common law may be drawn upon in settling disputes even though the statute or Constitution alone provides no precise answer to the question posed. See, e.g., *Textile Workers v. Lincoln Mills*, 353 U.S., at 458; *Clearfield Trust Co. v. United States*, 318 U.S., at 368-370. See generally *United States v. Little Lake Misere Land Co.*, 412 U.S. 580, 593 (1973) ("the inevitable incompleteness presented by all legislation means that interstitial federal law-making is a basic responsibility of the federal courts.").

Each of these sources of federal common law was recognized in *Illinois v. Milwaukee*. The Court there concluded that the common law of interstate nuisance supplied the requisite federal question jurisdiction to bring an action in District Court. In so deciding, the Court reasoned that it was appropriate for federal courts to fashion federal common law "when there is an overriding federal interest in the need for a uniform rule of decision or where the controversy touches basic interests of federalism." 406 U.S., at 105, n. 6. The Court relied heavily upon interstate air pollution and water allocation cases where the complaining party was a State invoking the Court's original jurisdiction. *Id.*, at 104-106. In addition, it recounted the history of federal interstate water quality legislation and suggested that the abiding federal interests in the purity of interstate waters justified application of federal common law. *Id.*, at 101-103. Significantly, the Court found no barrier to federal common law despite the number of federal statutes and regulations that already provided remedies to abate pollution in interstate waters. 406 U.S., at 103.

Thus, quite contrary to the statements and intimations of the Court today, *ante*, at 16, 19, 20, n. 19, *Illinois v. Milwaukee* did not create the federal common law of



nuisance. Well before this Court and Congress acted in 1972, there was ample recognition of and foundation for a federal common law of nuisance applicable to Illinois' situation.<sup>4</sup> Congress cannot be presumed to have been unaware of the relevant common-law history, any more than it can be deemed to have been oblivious to the decision in *Illinois v. Milwaukee*, announced six months prior to the passage of the Federal Water Pollution Control Act Amendments of 1972 (Act or Amendments), 86 Stat. 816. The central question is whether, given its presumed awareness, Congress, in passing these Amendments, intended to prevent recourse to the federal common law of nuisance.

The answer to this question, it seems to me, requires a more thorough exploration of congressional intent than is offered by the Court. Congress had "spoken to" the particular problem of interstate water pollution as far back as 1888,<sup>5</sup> and in 1948 did so in a broad and systematic fashion with the enactment of the Water Pollution Control Act.<sup>6</sup> In *Illinois v. Milwaukee*, the Court properly

<sup>4</sup> This Court had not previously indicated that the federal common law of nuisance provided a basis for federal question jurisdiction under 28 U.S.C. § 1331. But see *Texas v. Pankey*, 441 F. 2d 236 (CA10 1971). As recently as 1971, however, the Court had confirmed the existence of its original jurisdiction to consider a nuisance action brought by one State to vindicate its own sovereign interests or the interests of its citizens as a whole. See *Ohio v. Wyandotte Chemicals Corp.*, 401 U.S. 493, 496 (1971) (citing cases discussed at p. 28, *supra*). The significance of *Wyandotte*, was the Court's refusal for prudential reasons to exercise the original jurisdiction that concededly obtained. *Id.*, 499-505. The additional observation, that "So far as it appears from the present record, an action such as this, if otherwise cognizable in federal district court, would have to be adjudicated under state law," 401 U.S., at 498-499, n. 3 (emphasis added), was explained by the court one year later as "based on the preoccupation of that litigation with public nuisance under Ohio law." *Illinois v. Milwaukee*, 406 U.S., at 102, n. 3.

<sup>5</sup> See Act of June 29, 1888, 25 Stat. 209. See also Rivers and Harbors Act of 1899, 30 Stat. 1121.

<sup>6</sup> Pub. L. 80-845, 62 Stat. 1155 (1948).

regarded such expressions of congressional interest as not an obstacle but an incentive to application of the federal common law. 406 U.S., at 102-103. The fact that Congress in 1972 once again addressed the complicated and difficult problem of purifying our Nation's waters should not be taken as presumptive evidence, let alone conclusive proof, that Congress meant to foreclose pre-existing approaches to controlling interstate water pollution.<sup>7</sup> Where the possible extinction of federal common law is at issue, a reviewing court is obligated to look not only to the magnitude of the legislative action but also with some care to the evidence of specific congressional intent.<sup>8</sup>

<sup>7</sup> The Court at this point, *ante*, at 8-9, would rely on *Arizona v. California*, 373 U.S. 546 (1963), and *Mobil Oil Corp. v. Higginbotham*, 436 U.S. 618 (1978). But those cases do not stand for the broad proposition announced today. In *Arizona v. California*, Congress had developed a formula for apportioning the limited waters of the Colorado River and directed the federal agency to implement the formula. In the face of this express congressional allocation, the Court declined to substitute its own notions of an adequate apportionment. 373 U.S., at 565. In *Mobil Oil Corp. v. Higginbotham*, the Court confronted a statute that had created a precise federal remedy where before there had been none. Since federal law, when the statute was passed, did not address wrongful death on the high seas, and the statute itself expressed no intent to preserve or create federal remedies, the Court acceded to the particularized judgment of Congress. 436 U.S., at 625. Unlike the statutes at issue in those two cases, the 1972 Act addressed a broad and complex subject to which state and federal law had previously spoken, and in doing so recognized and encouraged many different approaches to controlling water pollution. See discussion in Part II, *infra*.

<sup>8</sup> Inevitably, a federal court must acknowledge the tension between its obligation to apply the federal common law in implementing an important federal interest, and its need to exercise judicial self-restraint and defer to the will of Congress. Congress, of course, may resolve this tension by making it known that flexible and creative judicial response on a case-by-case basis must yield to an interest in certainty under a comprehensive legislative scheme. At the same time, the fact that Congress *can* properly check the courts' exercise of federal common law does not mean that it has done so in a specific case. This Court is no more free to disregard

## II

In my view, the language and structure of the Clean Water Act leave no doubt that Congress intended to preserve the federal common law of nuisance. Section 505 (e) of the Act reads:

"Nothing in this section shall restrict any right which *any person* (or class of persons) may have under *any statute or common law* to seek enforcement of any effluent standard or limitation or to seek *any other relief* (including relief against the Administrator or a State agency)." 33 U.S.C. § 1365 (e) (emphasis added).

The Act specifically defines "person" to include States, and thus embraces respondents Illinois and Michigan. § 502 (5); 33 U.S.C. § 1362 (5). It preserves their right to bring an action against the governmental entities who are charged with enforcing the statute. Most important, as succinctly stated by the Court of Appeals in this case: "There is nothing in the phrase 'any statute or common law' that suggests that this provision is limited to state common law." 599 F. 2d 151, 163 (CA7 1979). To the best of my knowledge, every federal court that has considered the issue has concluded that, in enacting § 505 (e), Congress meant to preserve federal as well as state common law.<sup>9</sup>

expressions of legislative desire to preserve federal common law than it is to overlook congressional intent to curtail it. Indeed, the Court has admonished that statutes will not be construed in derogation of the common law unless such an intent is clear. *Isbrandtsen Co. v. Johnson*, 343 U.S. 779, 783 (1952) (citing cases). To say that Congress "has spoken," *ante*, at 9, n. 8, is only to begin the inquiry; the critical question is what Congress has said.

<sup>9</sup> *E.g.*, *National Sea Clammers Assn. v. City of New York*, 616 F. 2d 1222, 1238 n. 31 (CA3 1980), cert. granted, .... U.S. .... (1980); *California Tahoe Regional Planning Agency v. Jennings*, 594 F. 2d 181, 193 (CA9), cert. denied, 444 U.S. 864 (1979). See also *Illinois v. Outboard Marine Corp.*, 619 F. 2d 623, 626 (CA7 1980), cert. pending, No. 80-126; *United States v. Atlantic-Richfield Co.*, 478 F. Supp. 1215, 1218-1220 (Mont. 1979); *United States ex*

Other sections of the Clean Water Act also support the conclusion that Congress in 1972 had no intention of extinguishing the federal common law of nuisance. Although the Act established a detailed and comprehensive regulatory system aimed at eliminating the discharge of pollutants into all navigable waters, it did not purport to impose a unitary enforcement structure for abating water pollution. In particular, Congress expressly provided that the effluent limitations promulgated under the Act do not preclude any State from establishing more stringent limitations. § 510; 33 U.S.C. § 1370. It also made clear that federal officers or agencies are not foreclosed from adopting or enforcing stricter pollution controls and standards than those required by the Act § 511 (a); 33 U.S.C. § 1371 (a).

Thus, under the statutory scheme, any permit issued by the EPA or a qualifying state agency does not insulate a discharger from liability under other federal or state law.<sup>10</sup> To the contrary, the permit granted pursuant to § 402 (k), 33 U.S.C. § 1342 (k), confers assurances with respect to certain specified sections of the Act, but the requirements under other provisions as well as separate legal obligations remain unaffected. See *EPA v. State*

*rel. Scott v. United States Steel Corp.*, 356 F. Supp. 556, 559 (N.D. Ill. 1973); *United States v. Ira S. Bushey & Sons, Inc.*, 346 F. Supp. 145, 149 (Vt. 1972), *aff'd*, 487 F. 2d 1393 (CA2 1973), *cert. denied*, 417 U.S. 976 (1974).

The Court relies on *Committee for the Consideration of the Jones Falls Sewage System v. Train*, 539 F. 2d 1006, 1009, n. 9 (CA4 (1976)), in criticizing the "unlikely assumption" that § 505 (e) preserved anything other than "the more routine state law." *Ante*, at 22. *Jones Falls* offers no support for this criticism, since it concerned only intrastate pollution of navigable waters. Indeed, the court there assumed the continued applicability of federal common law where a State sought to vindicate its rights in an interstate controversy, *id.*, at 1010, but concluded that because the controversy was entirely local, the state common law of nuisance preserved by § 505 (e) furnished the relevant common law remedy.

<sup>10</sup> Cf. *New Jersey v. City of New York*, 283 U.S. 473, 477, 482-483 (1931) (compliance with permit requirements of federal statute does not bar injunctive relief in federal nuisance action).

*Water Resources Control Board*, 426 U.S. 200, 205 (1976). Congress plainly anticipated that dischargers might be required to meet standards more stringent than the minimum effluent levels approved by the EPA. Those more stringent standards would necessarily be established by other statutes or by common law. Because the Act contemplates a shared authority between the Federal Government and the individual States, see, *e.g.*, § 101 (b); 33 U.S.C. § 1251 (b), it is entirely understandable that Congress thought it neither imperative nor desirable to insist upon an exclusive approach to the improvement of water quality.<sup>11</sup>

The Court offers three responses to this view of congressional intent. With regard to the language of § 505 (e), it attributes critical significance to the words "this section," and concludes that Congress meant only to assure that the *citizen suit provision* did not extinguish formerly available federal common law actions. *Ante*, at 20-23. The Court thus reads § 505 (e) as though Congress had said that "this section" does not take away any pre-existing remedies, but the remainder of the statute does." This is an extremely strained reading of the statutory language,<sup>12</sup> and one that is at odds with the manifest intent of Congress to permit more stringent remedies under both federal and state law. See §§ 510, 511; 33 U.S.C. §§ 1370, 1371. If § 505 (e) is to be construed as the Court suggests, then it authorizes the abrogation of *all* pre-existing rights, both statutory and common law, in the area of water pollution control. The Court's construction therefore, would render suspect, if not meaningless, the Act's other provisions. Rather than inter-

<sup>11</sup> It is significant that elsewhere in the statute, Congress expressly manifested an intention to foreclose the applicability of other laws. See § 312 (f)(1); 33 U.S.C. § 1322 (f)(1). Congress thus demonstrated that it was capable of pre-empting a particular area when it chose to do so.

<sup>12</sup> The Court points to no other judicial decision that has construed the language of § 505 (e) in this fashion. See n. 9, *supra*.



preting § 505 (e) as a license to supplant all legal remedies outside the Act itself, I would construe the reference to "this section" as simply preventing pre-existing rights of action from being subjected to the procedural and jurisdictional limitations imposed by § 505 on persons who would sue under the Act.

The Court also relies on certain language contained in the legislative history of the 1972 amendments. *Ante*, at 11-12. Based on the remarks of several of the Act's proponents that this was the most comprehensive water pollution bill prepared to date, the Court finds a strong congressional suggestion that there is no room for improvement through the federal common law. But there is nothing talismanic about such generalized references. The fact that legislators may characterize their efforts as more "comprehensive" than prior legislation hardly prevents them from authorizing the continued existence of supplemental legal and equitable solutions to the broad and serious problem addressed.<sup>13</sup> Moreover, the Court ignores express statements of legislative intent that contradict its position. The Senate Report accompanying the 1972 legislation explicitly describes the congressional intent informing § 505 (e):

"It should be noted, however, that the section would specifically preserve any rights or remedies under

<sup>13</sup> There is nothing new about federal law in this area being characterized by its proponents as comprehensive. Similar claims were made in advancing the legislation in place when *Illinois v. Milwaukee* was decided. See, e.g., S. Rep. No. 462, 80th Cong., 1st Sess., 1 (1947) ("The purpose of the bill (S. 418) is to provide a comprehensive program for preventing, abating and controlling water pollution. . . ."); 94 Cong. Rec. 8195 (1948) ("The bill provides that the Surgeon General shall encourage a comprehensive program for the control of stream pollution between the States and to secure their cooperation in combating this evil." (Rep. Auchincloss)) That a different Congress, 24 years later, deemed this legislation inadequate (see *ante*, at 11, n. 10), carries no more significance than the post-mortems one may expect from the 104th Congress concerning the 1972 Act.



any other law. Thus, if damages could be shown, other remedies would remain available. Compliance with requirements under this Act would not be a defense to a common law action for pollution damages." S. Rep. No. 92-414, p. 81 (1971), reprinted in 2 A Legislative History of the Water Pollution Control Act Amendments of 1972, 93d Cong., 1st Sess., 1499 (Comm. Print 1973) (Leg. Hist.).<sup>14</sup>

This deliberate preservation of all remedies previously available at common law makes no distinction between the common law of individual States and federal common law. Indeed, the legislative debates indicate that Congress was specifically aware of the presence of federal common law, and intended that it would survive passage of the 1972 amendments. In one particularly revealing colloquy on the Senate floor, Senator Griffin noted the pendency of a suit challenging the dumping of iron ore pollutants into Lake Superior. 1 Legis. Hist. 191. See *Reserve Mining Co. v. EPA*, 514 F. 2d 492 (CA8 1975) (en banc). The Senator inquired whether the suit, which was based in part on the federal common law of nuisance,<sup>15</sup> would be affected by passage of the 1972 amendments. Senators Muskie<sup>16</sup> and Hart each responded that the new legislation would not affect or hinder "the suit now pending against the Reserve Mining Co. under the Refuse Act of 1980 . . . [.] the existing Federal Water Pollution Control Act or *other law*." 1 Legis. Hist. 211 (Sen. Hart) (emphasis added).<sup>17</sup>

<sup>14</sup> See also H. R. Rep. No. 92-911, pp. 132, 134 (1972), reprinted in 1 Legis. Hist. 819, 821.

<sup>15</sup> Legis. Hist. 191. See *Reserve Mining Co. v. EPA*, 514 F. 2d, at 501.

<sup>16</sup> The Court previously has observed that Senator Muskie was perhaps the Act's primary author, and has credited his views accordingly. See *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 129 (1977); *EPA v. National Crushed Stone Assn.*, .... U.S. ...., n. 10.

<sup>17</sup> See 1 Legis. Hist. 191-194. See also *id.*, at 248 (colloquy between Reps. Dingell and Wright); *id.*, at 252 (Rep. Dingell). The Court, *ante*, at 23-25, elaborately attempts to minimize the fact,

Finally, the Court attaches significance to the fact that the 1972 amendments provided a more rigorous administrative mechanism for addressing interstate controversies. *Ante*, at 19-20. The Court evidently regards the provision of a new administrative abatement process as a type of jurisdictional requirement, for it criticizes Illinois' failure to invoke the mechanism before seeking any form of judicial relief. *Id.*, at 19. Even if this were the case, the new notice and hearing procedure became available only two years after Illinois commenced this action. There is no suggestion that Illinois failed to pursue administrative abatement under the *then* applicable federal statute. Indeed, it is undisputed that Illinois made prolonged and diligent efforts to secure administrative relief.<sup>18</sup> Nonetheless, the Court in effect concludes that it

recognized by all participants in the Senate Colloquy, that the *Reserve Mining* case involved a common law nuisance count. In seeking assurances that the pending litigation would not be "adversely affect[ed]," Senator Griffin stated explicitly that the lawsuit was based on two pre-existing federal statutes and the common law of public nuisance. 1 Legis. Hist. 190-191. Senator Muskie's final response to Senator Griffin indicated his understanding that the suit as a whole would not be affected by the Act. *Id.*, at 194. Moreover, Senator Hart's reference to "other law" in the *Reserve Mining* case could have pertained only to the common law counts he had not already mentioned.

This entire discussion of the *Reserve Mining* case was initiated due to Senator Griffin's concern over the possible retroactive effect of § 402 (k) on litigation already commenced. Senators Muskie and Hart, as well as the EPA, took the position that there would be no disruption of the pending action, which had been commenced in February 1972, three months prior to this action. In his letter to Senator Griffin, the EPA General Counsel added a caveat that has obvious significance here:

"[I]t is reasonable to conclude that the courts will not interpret any legislation to deprive them of jurisdiction of pending litigation in the absence of clear and explicit language. There is no such clear and explicit language to this effect in the pending bill." 1 Legis. Hist. 193.

<sup>18</sup> Brief of respondent Illinois 8-9 (describing unsuccessful pursuit of administrative remedies); see 599 F. 2d, at 158 (describing administrative processes under statute before 1972).

is not enough to exhaust administrative remedies that existed at the time a common law action was initiated; a complainant must also be prepared to pursue new and wholly unforeseen administrative avenues even as it seeks a final judgment in federal court. I am aware of no case that adopts so harsh an approach to the pursuit of administrative remedies, and I see no basis for imposing such a requirement in this context.

Moreover, contrary to what the Court implies, Congress never intended that failure to participate in the § 402 administrative process would serve as a jurisdictional bar. Nothing in the language of § 402 suggests that a neighboring State's participation in the permit-granting process is anything other than voluntary and optional.<sup>19</sup> Indeed, the Conference Committee considering the 1977 amendments to the Act was presented with a proposal that *would* have made such participation a jurisdictional prerequisite.<sup>20</sup> This

<sup>19</sup> As the Court observes, the scheme established by § 402 "provides a *forum* for the pursuit" of a neighboring State's claim that the controls to be imposed are not sufficiently stringent. *Ante*, at 20 (emphasis added). There is nothing inconsistent about making this forum available, and encouraging its use, while at the same time permitting the pursuit of other remedies. If there are problems with the efficiency of such an approach, Congress of course is free to modify the statutory scheme.

<sup>20</sup> Following the District Court's ruling in this case, Congressman Aspin of Wisconsin proposed an amendment to § 402:

"Sec. (a) Section 402 of the Federal Water Pollution Control Act is amended by adding at the end thereof the following new subsection:

"(1) In any case where a State whose waters may be affected by the issuance of a permit under this section fails to submit any recommendations to the permitting State as authorized in subsection (b)(5) of this section, the State failing to make such a submission (and its persons) shall not have any standing to bring any action to abate (in whole or in part) as a nuisance under common law in any court of the United States any discharge which would have been the subject of such recommendations."

"(b) The amendment made by subsection (a) of this section shall be applicable to any action brought to abate (in whole or in part)

proposal was not adopted by the Conference Committee, and among its opponents was the Department of Justice. In a letter sent to all conferees, the Department made clear its understanding that, absent such an amendment, the federal common law would continue to be relied upon in the national effort to control water pollution.<sup>21</sup>

The Justice Department's position on the survival of federal common law is consistent with the stance taken by the EPA both in this litigation and throughout the period since the 1972 Amendments were enacted. The EPA in fact has relied upon the federal common law of

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as a nuisance under common law in any court of the United States any discharge of pollutants, unless a final decision has been rendered prior to the effective date of this amendment." App. to Brief for Illinois 98.

The proposal was made after both Houses had debated and passed the 1977 amendments to the Act but before the Conference Committee had met. In his testimony before a House committee considering the pending bill, Congressman Aspin voiced concern over the recent district court decision, and suggested that Congress "explicitly express its belief that federal common law has been preempted." Hearings before the House Committee on Public Works and Transportation on H. R. 3199, 95th Con-Cong., 1st Sess., 328 (1977).

<sup>21</sup> Letter to Senator Muskie from James Moorman, Asst. Atty. Gen., Land and Natural Resource Division, Oct. 18, 1977:

"The common law serves to give an injured party who may have been neglected by the statute or by an overburdened enforcing agency a form of redress. *There is no good argument for removing this opportunity for remedy.* The basic principle of the common law of public nuisance is that one is liable for damages caused to another where the benefit of one's action does not outweigh the harm. This is a sound principle. Where it can be shown that pollution has injured someone it should not be a sufficient defense to claim that the generalized standards of a statute have been complied with. Polluters should properly be held to a standard that holds them liable for unnecessarily injuring others and not simply for violating the statutory law. The number of cases under the common law will inevitably be small but where they are meritorious there is no basis for abolishing this cause of action." (Emphasis added.) App. to Brief for Illinois 101-103.

nuisance in addition to the remedies available under the statute in seeking to protect water quality.<sup>22</sup> As the agency charged with enforcing and implementing the Act, EPA's interpretation of the scope and limits of that statute is entitled to considerable deference. See *Udall v. Tallman*, 380 U.S. 1, 16 (1965). Where, as here, the agency has publicly and consistently acted upon its interpretation, congressional silence is not without significance, particularly since this area has been a subject of frequent and intense legislative attention. And where, as here, the agency's continued reliance on federal common law is firmly grounded in the language and structure of the statute. I fail to see how the Court can so lightly disregard its interpretation.

### III

Assuming that Congress did preserve a federal common law of nuisance, and that respondents properly stated federal common law claims for relief, there remains the question whether the particular common law applied here was reasonable. Because of its ruling, the Court does not explicitly address this question. Nonetheless, in its detailed review of respondents' claims, the Court in effect concludes that the federal common law applied by the District Court and the Court of Appeals was defective. In particular, the Court asserts that federal courts may not exceed the statutory minimum approach sanctioned by Congress, see *ante*, at 16, and may not use federal power to impose a State's more stringent pollution limitation standards upon out-of-state polluters. See *ante*, at 21. In contrast, I believe the courts below acted correctly in both respects.

<sup>22</sup> See, e.g., *Illinois v. Outboard Marine Corp.*, *supra*; *United States v. Hooker Chemicals & Plastic Corp.*, (WDNY No. 79-990, filed Dec. 20, 1979). Several courts have held that the United States can state a claim for relief under the federal common law of nuisance. See, e.g., *United States v. Ira S. Bushey & Sons, Inc.*, *supra*; *United States v. Solvents Recovery Serv.*, 496 F. Supp. 1127 (Conn. 1980).



As the Court of Appeals properly recognized, 599 F. 2d, at 164, the determination by Congress to preserve rights of action at federal common law did not grant federal courts the freedom to disregard the statutory and regulatory structure approved by Congress. We noted in *Illinois v. Milwaukee* that "the various federal environmental protection statutes will not necessarily mark the outer bounds of the federal common law, [but] they may provide useful guidelines in fashioning such rules of decision." 406 U.S., at 103, n. 5. These guidelines, however, bear primarily on the problems of proof faced by the parties; they do not determine the exclusive source of the law to be applied.

In this instance, problems of proof arise under a familiar form of common law action. A public nuisance involves unreasonable interference with a right common to the general public.<sup>23</sup> Drawing on the Court's decision in *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 238-239 (1907), the Court of Appeals concluded that nuisance is established at federal common law only if "the defendant is carrying on an activity that is causing an injury or significant threat of injury to some cognizable interest of the complainant." 599 F. 2d, at 165. Whether a particular interference qualifies as unreasonable, whether the injury is sufficiently substantial to warrant injunctive relief, and what form that relief should take are questions to be decided on the basis of particular facts and circumstances.<sup>24</sup> The judgments at times are difficult, but they do not require courts to perform functions beyond their traditional capacities or experience.<sup>25</sup>

<sup>23</sup> Restatement (Second) of Torts, § 821B (Tent. Draft No. 16, 1970). See generally W. Prosser, *The Law of Torts* 583-591 (4th ed. 1971); W. Rodgers, *Environmental Law* 102-107 (1977).

<sup>24</sup> See Restatement (Second) of Torts, at § 821B; Prosser, at 602-606; Note, *Federal Common Law in Interstate Water Pollution Disputes*, 1973 U. Ill. Law Forum 141, 154-158.

<sup>25</sup> See, e.g., *Reserve Mining Co. v. EPA*, 514 F. 2d 492, 506-540 (CA8 1975) (en banc); *United States v. Armco Steel Corp.*, 333 F. Supp. 1073, 1079-1084 (SD Tex. 1971); *Commonwealth v. Barnes*



When choosing the precise legal principles to apply, common law courts draw upon relevant standards of conduct available in their communities. When federal common law is concerned, "th[is] choice-of-law task is a federal task for federal courts." *United States v. Little Lake Misere Land Co.*, 412 U.S., at 592. At the same time, while federal law controls a particular question or problem, state law may furnish an appropriate measure of the content of this federal law. See, e.g., *Board of Comm'rs v. United States*, 308 U.S. 343, 349-352 (1939). See also *Textile Workers v. Lincoln Mills*, 353 U.S. 448, 457 (1957); *Clearfield Trust Co. v. United States*, 318 U.S. 363, 367 (1943). What the Court today characterizes as the inappropriate application of more stringent standards from Illinois state law in fact reflects a federal common law court's proper exercise of choice-of-law discretion.<sup>26</sup>

The Act sets forth certain effluent limitations. As did the Court of Appeals,<sup>27</sup> a court applying federal common

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& *Tucker Co.*, 455 Pa. 392, 319 A. 2d 871 (1974); *Boomer v. Atlantic Cement Co.*, 26 N.Y. 2d 219, 257 N.E. 2d 870 (1970); *People ex rel. Stream Control Comm'n v. City of Port Huron*, 305 Mich. 153, 9 N.W. 2d 41 (1943); *Board of Comm'rs v. Elm Grove Mining Co.*, 122 W. Va. 442, 9 S.E. 2d 813 (1940); *Fink v. Board of Trustees*, 71 Ill. App. 2d 276, 218 N.E. 2d 240 (1966); *City of Murphysboro v. Sanitary Water Board*, 10 Ill. App. 2d 111, 134 N.E. 2d 522 (1956). Thus, there can be no merit to the Court's suggestion, *ante*, at 18-19, that the technical difficulty of the subject matter renders inappropriate any recourse to the common law. The complexity of a properly presented federal question is hardly a suitable basis for denying federal courts the power to adjudicate. Indeed, the expert agency charged with administering the Act has not hesitated to invoke this common law jurisdiction where appropriate.

<sup>26</sup> Moreover, that the District Court may have abused its discretion is no basis for concluding that state law standards are irrelevant to the federal common law.

<sup>27</sup> 599 F. 2d, at 167-168. See also unpublished order of the Court of Appeals, App. to Pet. for Cert. B-2 to B-4; unpublished findings of fact and conclusions of law of the District Court, *id.*, at F-1 to F-30.

law in a given instance may well decline to impose effluent limitations more stringent than those required by Congress, because the complainant has failed to show that stricter standards will abate the nuisance or appreciably diminish the threat of injury. But it is a far different proposition to pronounce, as does the Court today, that federal courts "*lack authority* to impose more stringent effluent limitations under federal common law than those imposed" under the statutory scheme. *Ante*, at 14 (emphasis added). The authority of the federal courts in this area was firmly established by the decision in *Illinois v. Milwaukee*. In delineating the legitimate scope of the federal common law, the Court there expressly noted the relevance of state standards, adding that "a State with high water-quality standards *may well ask that its strict standards be honored and that it not be compelled to lower itself* to the more degrading standards of a neighbor." (Emphasis added.) 406 U.S., at 107. The Act attributes comparable respect to the stricter effluent limitation levels imposed by individual States. § 510; 33 U.S.C. § 1370. Since both the Court and Congress fully expected that neighboring States might differ in their approaches to the regulation of the discharge of pollutants into their navigable waters, it is odd, to say the least, that federal courts should now be deprived of the common law power to effect a reconciliation of these differences.

The problem of controlling overflows is particularly amenable to application of this common law authority. As the courts below found, see 599 F. 2d, at 167-168, the sewer systems operated by petitioners include some 239 bypass or overflow points from which raw sewage is discharged directly into Lake Michigan or into rivers that flow into the lake. In a single month in 1976, discharge from 11 of the 239 discrete overflow points amounted to some 646 million gallons of untreated sewage. *Ibid*. The trial court determined that these untreated fecal wastes, containing billions of pathogenic bacteria and viruses, are periodically transported by prevailing currents into the Illinois waters of Lake Michigan. The court further found

that the presence of these pathogens in Illinois waters poses a significant risk of injury to Illinois residents, threatening to contaminate drinking water supplies and infect swimmers.<sup>28</sup>

Pursuant to the Act, publicly owned treatment works then in existence must apply "secondary treatment as defined by the Administrator" as of July 1, 1977, §§ 301 (b)(1)(B), 304 (d)(1); 33 U.S.C. §§ 1311 (b)(1)(B), 1314 (d)(1).<sup>29</sup> No provision of the Act explicitly addresses the discharge of raw sewage into public waters from overflow points. Indeed, Congress in 1977 expressed concern that combined sewer overflows were a significant source of untreated sewage polluting the Nation's waters, and it commissioned a study of the problem with a view toward possible further legislation.<sup>30</sup> While the Administrator has issued regulations that define secondary treatment in terms of certain minimum levels of effluent quality, he also has acknowledged that combined sewer overflows raise special concerns that must be resolved on a case-by-case basis.<sup>31</sup>

<sup>28</sup> There is little to be gained by undertaking an extensive review of the record evidence on these points. The Court of Appeals did this and concluded that the findings at trial were not clearly erroneous. I see no reason to disturb the Court of Appeals' view of the evidence.

<sup>29</sup> Congress in 1977 amended the Act to permit the Administrator to grant extensions of the 1977 deadline under certain conditions. See Pub. L. 95-217, §§ 44, 45, 91 Stat. 1584, 33 U.S.C. §§ 1311 (h) and (i) (1976 ed., Supp. III).

<sup>30</sup> Pub. L. 95-217, § 700, 91 Stat. 1608. See S. Rep. No. 95-370, p. 81 (1977). The study was issued in October 1978. See EPA, Report to Congress on Control of Combined Sewer Overflow in the United States.

<sup>31</sup> See 40 CFR §§ 133.102 and 133.103 (1980). In addition, sewers and pipes that do not lead to a treatment facility are not considered "publicly owned treatment works" for purposes of § 301, 33 U.S.C. § 1311. See 40 C.F.R. § 122.3, p. 70 (1980). In the absence of technology-based treatment requirements for combined sewer overflows, the Administrator mandates an individualized analysis by each system that seeks federal assistance. See EPA, Benefit Analysis for Combined Sewer Overflow Control 3 (1979).

This record demonstrates that both Congress and the Administrator recognized the inadequacy of the statutory scheme. It surely does not show that these responsible parties intended no role for the federal common law.

The lower courts in this case carefully evaluated the regulatory systems developed by each State to deal with the overflow problem. It was determined that the standards promulgated under the Illinois regulatory scheme were more stringent than those developed by the Wisconsin agency or imposed on petitioners under the Wisconsin state court judgment. See 599 F. 2d, at 171-173. The District Court's order imposed standards that reflected the more rigorous approach adopted in Illinois to restore and protect Illinois waters.<sup>32</sup> The Court of Appeals noted that Wisconsin had allowed petitioners more time in which to eliminate or "correct" the overflow problem, but that petitioners conceded the feasibility of complying with the District Court's deadlines. *Id.*, at 172, 177. In my view, the Court of Appeals acted responsibly and in a manner wholly consistent with the common law jurisdiction envisioned by the Court in *Illinois v. Milwaukee*.

#### IV

There is one final disturbing aspect to the Court's decision. By eliminating the federal common law of nuisance in this area, the Court in effect is encouraging recourse

<sup>32</sup> While the Wisconsin permit-granting agency and the Wisconsin state courts devised one approach to regulating combined sewer overflows in the Milwaukee system, this alone does not establish that the applicable legal standard under federal common law is the one adopted by Wisconsin. To hold otherwise would in effect nullify a neighboring State's more stringent pollution control standards even in circumstances where, as here, a significant risk of harm to the neighboring State's citizenry has been established; if a polluting State is not violating its own approved standards, a neighboring State with higher standards than has no recourse under the Act. It is in precisely this context that the Court recognized the significance of federal common law. *Illinois v. Milwaukee*, 406 U.S., at 107-108.

to state law wherever the federal statutory scheme is perceived to offer inadequate protection against pollution from outside the State, either in its enforcement standards or in the remedies afforded. This recourse is now inevitable under a statutory scheme that accords a significant role to State as well as federal law. But in the present context it is also unfortunate, since it undermines the Court's prior conclusion that it is federal rather than state law that should govern the regulation of *interstate* water pollution. *Illinois v. Milwaukee*, 406 U.S., at 102. Instead of promoting a more uniform federal approach to the problem of alleviating interstate pollution, I fear that today's decision will lead States to turn to their own courts for statutory or common law assistance in filling the interstices of the federal statute. Rather than encourage such a prospect, I would adhere to the principles clearly enunciated in *Illinois v. Milwaukee*, and affirm the judgment of the Court of Appeals.



H-1

**APPENDIX H**

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**SUPREME COURT OF THE UNITED STATES**

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No. 79-571. Illinois, petitioner,

v.

City of Milwaukee, et al.

451 US 982, 68 L Ed 2d 839, 101 S Ct 2313.

May 18, 1981. Petition for writ of certiorari to the United States Court of Appeals for the Seventh Circuit denied.

Same case below, 599 F2d 151.

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## APPENDIX I

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### SUPREME COURT OF THE UNITED STATES

No. A-918 (79-408)

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CITY OF MILWAUKEE, ET AL.

*Petitioners,*

*v.*

ILLINOIS, ET AL.

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### ORDER

UPON CONSIDERATION of the application of counsel for the petitioners, the response filed by the State of Illinois and the reply thereto,

IT IS ORDERED that all judgments, decrees and orders entered by the United States Court of Appeals for the Seventh Circuit, Case No. 77-2246, and the United States District Court for the Northern District of Illinois in the above-entitled case be, and the same are hereby, stayed pending the sending down of the judgment of this Court.

/s/ JOHN PAUL STEVENS  
Associate Justice of the Supreme  
Court of the United States

Dated this 8 day of May, 1980

A true copy: MICHAEL RODAK, JR.

Teste:

Clerk of the Supreme Court of the United States

By /s/ FRANCIS J. LORSON

Deputy

APPENDIX J

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IN THE  
UNITED STATES COURT OF APPEALS  
FOR THE SEVENTH CIRCUIT

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No. 77-2246

PEOPLE OF THE STATE OF ILLINOIS,

*Plaintiff-Appellee,*

and

PEOPLE OF THE STATE OF MICHIGAN,

*Intervening Plaintiff-Appellee,*

*v.*

CITY OF MILWAUKEE, THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE, and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendant-Appellants.*

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Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.  
No. 72-C-1253—John F. Grady, Judge.

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ARGUED MAY 24, 1978—SUBMITTED AFTER SUPPLEMENTAL  
BRIEFING OCTOBER 12, 1978—DECIDED APRIL 26, 1979

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Before FAIRCHILD, *Chief Judge*, TONE, *Circuit Judge*, and HARPER, *Senior District Judge*.\*

TONE, *Circuit Judge*. The State of Illinois filed this action under the federal common law of nuisance to enjoin the City of Milwaukee and the Sewerage Commissions of the City and County of Milwaukee<sup>1</sup> from discharging raw sewage and inadequately treated sewage into Lake Michigan.<sup>2</sup> Illinois alleged and undertook to prove at trial that the sewage contains pathogens, disease-causing viruses and bacteria, which are transported by currents into parts of the lake that lie within Illinois, where they present a substantial threat to the health of Illinois residents, and also that the sewage contains nutrients that accelerate eutrophication of the lake. The State of Michigan intervened as a plaintiff on the eutrophication issue only. After a four month trial, the district court found that plaintiffs had proved their allegations and entered a judgment requiring defendants to cease discharging raw sewage and

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\* The Honorable Roy W. Harper, Senior District Judge of the United States District Court for the Eastern and Western Districts of Missouri, is sitting by designation.

<sup>1</sup> For practical purposes, the two commissions may be regarded as one. See also n. 33, *infra*. The chief administrative officer for both is the same man; he also serves as the secretary for both commissions. The county commission has no employees other than the chief administrative officer and secretary referred to and uses the staff of the city commission when necessary. [Tr. 110-113.] In this opinion we differentiate between the two only when the difference is significant. [Record references in brackets are included in the slip opinion for the convenience of judges, counsel, and others who have access to the record but will be omitted from the opinion as it will appear in the Federal Second Reporter.]

<sup>2</sup> Illinois also named three other Wisconsin cities as defendants in this case: Kenosha, Racine, and South Milwaukee. They are not involved in this appeal.

After judgment was entered the County of Milwaukee moved to intervene as an indispensable party under Rule 19(b), Federal Rules of Civil Procedure (Fed. R. Civ. P.). The motion was denied; this court affirmed, without written opinion. The Supreme Court denied certiorari, 47 U.S.L.W. 3583 (1979).

to treat sewage before discharging it in compliance with effluent limitations more stringent than the minimum limitations imposed pursuant to the Federal Water Pollution Control Act, 33 U.S.C. § 1251, *et seq.* Defendants appeal, raising the issues of (1) whether the relief available in an action based on the federal common law of nuisance is greater than that available under the federal statute, and (2) whether the evidence in this case is sufficient to support the relief granted. As to the first question, we hold that the statute does not limit the relief that may be granted; as to the second, we hold that the evidence is sufficient to support only some of the relief granted and therefore affirm in part and reverse in part.

This litigation began with Illinois' petition for leave to file an original action in the Supreme Court of the United States, which was denied, *Illinois v. Milwaukee*, 406 U.S. 91 (1972). Illinois then filed suit in the United States District Court for the Northern District of Illinois. Defendants' motions to dismiss for lack of *in personam* jurisdiction and improper venue were denied, *Illinois v. Milwaukee*, 4 E.R.C. 1849 (N.D. Ill. 1972); later, defendants' motions to dismiss for failure to state a claim on which relief could be granted were also denied, *Illinois v. Milwaukee*, 366 F.Supp. 298 (N.D. Ill. 1973).

In due course the case proceeded to trial, at the conclusion of which the judge orally and extemporaneously announced his findings of fact and conclusions of law. The facts and the relief granted will be described later, as they become pertinent to the issues discussed.

Defendants-appellants' position is supported by the briefs of three *amici curiae*: the State of Wisconsin, the National League of Cities, and the United States Conference of Mayors. In addition, the United States has filed a brief *amicus curiae* in which it takes no position on the merits but supports the arguments of Illinois and Michigan that the federal common law of nuisance is not preempted or limited by federal legislation.



After oral argument this court ordered supplemental briefing addressed to (1) the elements required to be proved to establish a claim for common law nuisance, (2) identification of particularized findings of the district court considered material to those elements and record references to the evidence supporting those findings, and (3) identification of evidence in the record supporting the reasonableness and necessity of the relief granted by the trial court. The parties filed extensive supplemental briefs, and each side subsequently filed a reply to the other's supplemental brief, as a consequence of which submission of the case was delayed until October 1978.

# I.

## *Objections to the Forum*

Defendants raise three arguments that may be broadly characterized as objections to the forum. First, defendants contend that they have committed no "tortious act within" the State of Illinois as that phrase is used in the Illinois "long-arm" statute, § 17 of the Illinois Civil Practice Act, Ill. Rev. Stat. ch. 110, § 17 (1977), and therefore service of process was ineffective and the United States District Court sitting in Illinois could not exercise personal jurisdiction over them. See Rule 4(e), Federal Rules of Civil Procedure (Fed. R. Civ. P.). Second, defendants contend that their contacts with Illinois are insufficient to meet the minimum required by *International Shoe v. Washington*, 326 U.S. 310 (1945). Third, defendants contend that even if the court had personal jurisdiction, venue was improper. Judge Bauer, then a district judge, rejected these contentions in denying defendants' pretrial motions to dismiss in *Illinois v. Milwaukee*, *supra*, 4 E.R.C. at 1850, and we do likewise.

For purposes of § 17 "a tort is committed in the place where the injury occurs." *McBreen v. Beech Aircraft Corp.*, 543 F.2d 26, 28 (7th Cir. 1976). It seems beyond dispute that injury to the plaintiff in this case occurred in Illinois. Cf. *Ohio v. Wyandotte Chemicals Corp.*, 401 U.S. 493, 500 (1971).

As to the second contention, the critical issue is whether it is fair and reasonable to require the defendants to defend in Illinois. See *Kulko v. Superior Court of California*, 436 U.S. 84, 92 (1978); *Telco Leasing, Inc. v. Marshall County Hospital*, 586 F.2d 49 (7th Cir. 1978).<sup>3</sup> Each year defendants dump into Lake Michigan millions of gallons of pathogen-containing sewage, which the district court found is sometimes carried into Illinois waters and presents a substantial threat of harm to Illinois residents. Under such circumstances, we do not think it unfair or unreasonable to require the defendants to defend their conduct in a federal forum located within the State of Illinois. See *Ohio v. Wyandotte Chemicals Corp.*, *supra*, 401 U.S. at 500.

Defendants argue that venue was improper for three different reasons: (1) the venue provision of the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, 86 Stat. 816, requires that the suit be filed in the district where the source is located, (2) all "nuisance" actions are "local" and therefore must be filed in the district where the source is located, and (3) all actions against a municipal corporation are "local" and therefore must be filed in the district where the municipal corporation is located. The first argument is quickly disposed of, for the venue provision of the statute is by its terms inapplicable. That provision is relevant only to "action[s] respecting a violation . . . of an effluent standard or limitation . . . brought under [§ 505] . . . ." § 505(c)(1). Here, plaintiff's action is based on the federal common law of

<sup>3</sup> If Congress had chosen to authorize nationwide service of process, no minimum contacts issue would be raised. See, e.g., *Fitzsimmons v. Barton*, 589 F.2d 330, 333 (7th Cir. 1979); *Mariash v. Morill*, 496 F.2d 1138, 1143 & n. 6 (2d Cir. 1974). Congress has not done so and Fed. R. Civ. P. 4(e) makes jurisdiction dependent on the long-arm statute or rule of court of the state in which the district court is held; therefore we are required to determine whether defendants' contacts with Illinois are sufficient to support the exercise of *in personam* jurisdiction.

nuisance. Therefore the relevant venue provision is 28 U.S.C. § 1391(b), which permits suit in either the "judicial district where all defendants reside, or in which the claim arose . . . ." *Illinois v. Milwaukee, supra*, 406 U.S. at 108 n.10.

Whatever may be the significance of state law in determining whether an action is "transitory" or "local" in other contexts,<sup>4</sup> we agree with the district court, *Illinois v. Milwaukee, supra*, 4 E.R.C. at 1850, that the language in the Supreme Court's opinion in *Illinois v. Milwaukee, supra*, 406 U.S. at 108 n.10, indicates that an action against a municipal corporation and based on the federal common law of nuisance may be filed, pursuant to 28 U.S.C. § 1391(b), in either the district where all the defendants reside or the district where the claim arose, without regard to any otherwise applicable state venue statutes or common law rules. In this case, the claim arose in the Northern District of Illinois, where the injury was suffered, and therefore venue was proper.<sup>5</sup>

<sup>4</sup> See, e.g., *French v. Clinchfield Coal Company*, 407 F.Supp. 13, 16-17 n. 11 (D.Del. 1976) (Caleb Wright, J.); *Hasburgh v. Executive Aircraft Company*, 35 F.R.D. 354, 355 (W.D.Mo. 1964); see generally 1 *Moore's Federal Practice* § 0.142 [2.—1], 1368-1369 & nn. 40-41 (1978); Wright, *Law of Federal Courts* 158 (2d ed. 1970); Wright, Miller & Cooper, 15 *Federal Practice and Procedure* § 3822 (1976).

<sup>5</sup> There is some debate as to whether there ought to be a uniform rule of law in federal courts governing the question of whether an action is "local" or "transitory." See, e.g., *French v. Clinchfield, supra*, 407 F.Supp. at 16-17 n. 11; Wright, Miller & Cooper, *supra*, § 3822 at 129-130; 1 *Moore's Federal Practice, supra*, at 1368-1369 & n. 40. *Illinois v. Milwaukee, supra*, 406 U.S. 108 n. 10, can also be understood as resolving this debate in favor of a uniform federal rule, at least in federal common law nuisance actions, and as indicating that such actions should be treated as "transitory." Under either interpretation of the language, § 1391(b) is applicable and venue was proper.

## II.

*Effect of Federal Statutes on  
Federal Common Law of Nuisance*

In *Illinois v. Milwaukee*, *supra*, 406 U.S. 91, the Court denied Illinois' petition for leave to file an original action under 28 U.S.C. § 1251(a)(1),<sup>6</sup> on the ground that "States," as used in that provision, does not include political subdivisions. *Id.* at 98. The Court also declined to exercise its jurisdiction under 28 U.S.C. § 1251(b)(3),<sup>7</sup> since the issues raised in the complaint were governed by federal common law, and therefore an appropriate district court would have jurisdiction of the case under 28 U.S.C. § 1331(a).<sup>8</sup> After reviewing the provisions of the Federal Water Pollution Control Act, 62 Stat. 1155,<sup>9</sup> and other federal legislation regulating pollution of interstate waters, the Court held that federal common law had not been preempted, but noted "that new federal laws and new federal regulations may in time preempt the field of federal common law of nuisance." *Id.* at 107. Shortly after that decision Congress adopted the comprehensive Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, 86 Stat. 816. In 1977 Congress further amended the Act. P.L. 95-217, 91 Stat. 1566. Defendants concede that neither the 1972 nor the 1977 amendments preempt the

<sup>6</sup> That provision states,

The Supreme Court shall have original and exclusive jurisdiction of: (1) All controversies between two or more States; . . .

<sup>7</sup> That provision states,

The Supreme Court shall have original but not exclusive jurisdiction of: . . . (3) All actions . . . by a State against the citizens of another State . . . .

<sup>8</sup> That provision states,

The district courts shall have original jurisdiction of all civil actions wherein the matter in controversy . . . arises under the . . . laws . . . of the United States . . . .

<sup>9</sup> For the provisions of the statute as amended at the time of this Court's decision *see* 33 U.S.C. § 1151 *et seq.* (1970).

federal common law of nuisance. Wisconsin's brief *amicus curiae*, however, argues that the comprehensive statutory scheme preempts the common law. The brief of the United States as *amicus curiae* argues to the contrary. Since the issue concerns our jurisdiction, we are obliged to consider it. See, e.g., *American Meat Institute v. EPA*, 526 F.2d 442, 448-449 (7th Cir. 1975). In addition, we consider whether the statute, even if it does not preempt the federal common law, limits the relief that may appropriately be granted or otherwise influences the principles to be applied in this action.

#### A. Federal Water Pollution Control Act

##### 1. The Statute Before 1972

The pre-1972 Federal Water Pollution Control Act, 62 Stat. 1155, as amended, 33 U.S.C. 1151, *et seq.* (1970), authorized each state, with the approval of the Secretary of the Interior, to adopt "water quality criteria applicable to interstate waters or portions thereof within" the state, 33 U.S.C. § 1160(c)(1) (1970), for the purposes of protecting the public health or welfare and enhancing the quality of water, see 33 U.S.C. § 1160(c)(3) (1970). If any state failed to adopt acceptable water quality criteria, the Act authorized the Secretary of the Interior to prescribe them, 33 U.S.C. § 1160(c)(2) (1970); water quality standards prescribed by the Secretary were subject to modification after review by a "Hearing Board" on petition of the governor of any state affected by the standards, 33 U.S.C. § 1160(c)(4) (1970). The Act also provided enforcement procedures, recently described by the Supreme Court as "cumbrous." *EPA v. California ex rel. State Water Resources Control Board*, 426 U.S. 200, 202 (1976); see also *Illinois v. Milwaukee*, *supra*, 406 U.S. at 103 (describing the enforcement procedures as "long" and "drawn-out").

The procedures for abating pollution originating in one state but allegedly causing harm in a second state are of primary importance for our purposes. The Act provided



that upon complaint of the governor or water pollution control agency of the second state, the Secretary should call a conference, giving all the interested parties notice of, and an opportunity to make statements at, the conference. 33 U.S.C. § 1160(d)(1), (3) (1970). After the conference, the Secretary was directed to prepare a report for the benefit of the state agencies represented at the conference in which he summarized the proceedings and discussed, among other things, the adequacy of the measures taken to abate the pollution. 33 U.S.C. § 1160(d)(4) (1970). If the measures already taken were deemed inadequate, the Secretary was to recommend appropriate remedial action to the water pollution agency in the state from which the pollution came. 33 U.S.C. § 1160(e) (1970). If after "at least six months" the state agency had not taken the necessary action, the Secretary was directed to conduct hearings at which all the interested parties would again be given an opportunity to make statements, this time before a "Hearing Board." 33 U.S.C. § 1160(f)(1) (1970). If the Hearing Board found that pollution endangering the public health or welfare was indeed occurring and that adequate steps toward abatement had not been taken, it submitted its findings and recommendations "concerning the measures, if any, which it [found] to be reasonable and equitable to secure abatement of such pollution." *Id.* The Secretary then forwarded the Hearing Board's findings and recommendations "together with a notice specifying a reasonable time (not less than six months) to secure abatement of such pollution" to the polluters and the originating state's water pollution control agency. *Id.* If the polluter or state agency failed to take "action reasonably calculated to secure abatement" within the specified time, then the Secretary was authorized to request the Attorney General to file suit to secure abatement. 33 U.S.C. § 1160(g)(1) (1970). Discharges that reduced the quality of water below any "water quality criteria" established under the Act were subject to abatement pursuant to similar procedures. 33 U.S.C. § 1160(c)(5) (1970). The Act made no provision for private abatement suits.



It is this system of interstate water pollution abatement, in combination with the discharge permit system administered by the Army Corps of Engineers, see note 16, *infra*, and other federal legislation, that the Court found insufficient to preempt the federal common law of interstate water pollution in *Illinois v. Milwaukee*, *supra*, 406 U.S. at 101-103, 107.

## 2. The 1972 Act

Because of the inadequacies inherent in the "water quality" approach and, among other things, the ineffectiveness of the enforcement procedures described above,<sup>10</sup> Congress adopted the Federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. § 1251, *et seq.* The 1972 amendments, which we sometimes refer to herein as the Act or FWPCA, substantially rewrote the statute, supplementing the water quality criteria with direct discharge limitations and greatly strengthening enforcement procedures. Congress declared that the national goal was to eliminate the discharge of pollutants into navigable waters by 1985. To achieve that goal, Congress established general technology-based levels of treatment for any pollutant that is to be discharged into navigable waters and specified dates by which those levels of treatment are to be achieved, § 301;<sup>11</sup>

<sup>10</sup> See S.Rep. No. 92-414, reprinted in [1972] *U.S. Code Cong. & Ad. News* 3668, 3671-3674 (1972); see also Note, "Federal Common Law in Interstate Water Pollution Disputes," 1973 *U. Ill. L. F.* 141, 143-144 & nn. 12-14.

<sup>11</sup> Sections of the 1972 Act (P.L. 92-500, 86 Stat. 816) are referred to in this opinion by their designations in the Statutes at Large. The paralled United States Code citations for the sections to which reference is made are as follows:

Section 101	—	33 U.S.C. § 1251
Section 201	—	33 U.S.C. § 1281
Section 212	—	33 U.S.C. § 1292
Section 301	—	33 U.S.C. § 1311
Section 304	—	33 U.S.C. § 1314
Section 309	—	33 U.S.C. § 1319

(Footnote continued on following page)

all point sources<sup>12</sup> except publicly owned treatment works<sup>13</sup> must adopt the "best practicable control technology currently available" by July 1, 1977, and the "best available technology economically achievable" by July 1, 1983, §§ 301(b)(1)(A), (2)(A); publicly owned treatment works are required to adopt "secondary treatment" by July 1, 1977 and "the best practicable waste treatment over the life of the [treatment] works" by July 1, 1983, §§ 301(b)(1)(B), (2)(B), and 201(g)(2)(A). The Act directs the Administrator of the Environmental Protection Agency (EPA)<sup>14</sup> to prescribe the specific effluent limitations achievable using "best practicable" treatment technology,

<sup>11</sup> *continued*

Section 402	—	33 U.S.C. § 1342
Section 502	—	33 U.S.C. § 1362
Section 505	—	33 U.S.C. § 1365
Section 510	—	33 U.S.C. § 1370
Section 511	—	33 U.S.C. § 1371

<sup>12</sup> "Point source" is defined as "any discernible, confined and discrete conveyance, . . . from which pollutants are or may be discharged." § 502(14).

<sup>13</sup> For purposes of "Title II—Grants for Construction of Treatment Works," treatment works are defined as "any devices or systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 201 of the Act [which is designed to encourage the development of the "best practicable waste treatment" over the life of the treatment work] . . . [and] any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and sanitary sewer systems." §§ 212(2)(A), (B). Although "treatmentworks" is not defined for purposes of "Title III—Standards and Enforcement," the definitions provided in § 212 provide an indication of what may have been intended. We recently noted that "[a]n earlier specific definition may properly color a subsequent use of the same words without redefinition," quoting from *Kent Mfg. Corp. v. Commissioner*, 288 F.2d 812, 815 (4th Cir. 1961). *Nachman Corp. v. Pension Benefit Guaranty Corp.*, .... F.2d ....., .... n. 6 (7th Cir. 1979).

<sup>14</sup> "EPA" in this opinion includes the administrator and the agency.

§§ 301(b)(1)(A), 304(b)(1), "best available" treatment technology, §§ 301(b)(2)(A), 304(b)(2), and "secondary" treatment technology, §§ 301(b)(1)(B), 304(d)(1). *See, e.g., E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 126-136 (1977); *American Meat Institute v. EPA*, *supra*, 526 F.2d at 448-452. In addition, all point sources, presumably including publicly owned treatment works, must comply with "any more stringent limitation . . . established pursuant to any state law or regulations (under authority preserved by § 510)<sup>15</sup> or any other Federal law or regulations . . . ." § 301(b)(1)(C).

The 1972 Act also created a permit system, called the National Pollutant Discharge Elimination System (NPDES), under which discharge permits may be granted by EPA or, where a state provides satisfactory assurances that it will enforce the requirements of the Act and EPA regulations, a designated agency of the state.<sup>16</sup> And discharges, except in compliance with the limitations imposed in a permit, are declared unlawful. § 301(a). A permit must require the discharger to meet the minimum effluent lim-

<sup>15</sup> Section 510 provides,

Except as expressly provided . . . nothing in this Act shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this Act, such State or political subdivision or interstate agency may not adopt or enforce any . . . less stringent . . . effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard or standard of performance . . . ; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to waters . . . of such States.

<sup>16</sup> This system replaced the permit system formerly administered by the Army Corps of Engineers under the Act of 1899, 30 Stat. 1152, 33 U.S.C. § 407. *United States Steel Corp. v. Train*, 556 F.2d 822, 831 & n. 7 (7th Cir. 1977); *American Meat Institute v. EPA*, *supra*, 526 F.2d at 446.

itations prescribed in the Act and EPA regulations. § 402(b)(1)(A).

Each state agency established under the National Pollutant Discharge Elimination System is required to notify EPA of any permit to be issued under the program. § 402(d)(1). If, under the permit, the waters of another state "may be affected," the agency is required to notify the other state, to give the other state an opportunity to submit written recommendations concerning the limitations to be imposed in the permit, and if those recommendations are not adopted, to explain why in writing to EPA and the other state. §§ 402(b)(3), (5).

EPA may veto the issuance of any discharge permit if the waters of a state other than the issuing state may be affected. §§ 402(d)(2)(A), (b)(5). It is not clear whether the veto can be based on a ground other than violation of a standard imposed pursuant to the Act by EPA or a state. The language of § 402(d)(2)(A) suggests that it can.<sup>17</sup> The legislative history, however, indicates that the veto must be based upon the issuing state's failure to impose limitations sufficient to assure that applicable effluent limitations, either those imposed under the Act by EPA

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<sup>17</sup> Section 402(d)(2) provides that,

No permit shall issue (A) if the Administrator within ninety days of his notification under subsection (b)(5) of [402] objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this Act.

Comparison of §§ 402(d)(2)(A) and (B) suggest that, although vetoes must usually be based on a violation of the effluent limitations imposed under the Act, there is no such requirement where the interests of a second state are involved. *But cf.* § 505(h) (authorizing governor's suit against Administrator of EPA, but only for failure to enforce effluent limitations imposed under the Act against a point source in another state resulting in harm to waters in governor's state) quoted in note 19, *infra*; see also § 505(a) (citizens' suits to enforce limitations imposed under the Act).

or those imposed by the affected state, are respected.<sup>18</sup> Since there has been no veto here, it is unnecessary for us to resolve this ambiguity.

<sup>18</sup> The Administrator's general veto authority is expressly limited to cases in which the minimum limitations imposed under the Act are violated. § 402(d)(2)(B). The Senate version of the Act, S. 2770, provided that no permit could be issued by any state agency "until the Administrator is satisfied that the conditions imposed by the State meet the requirements of this Act." S. 2770, 92d Cong., 1st Sess. § 402(d)(2) (1971), reprinted in 117 Cong. Rec. 38865, 38883 (1971); Library of Congress, *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 1534, 1690 (1973). The House version of the Act, H.R. 11896, specifically rejected the permit-by-permit review approach S. 2770 and only authorized the Administrator to veto those permits under which the waters of a second state might be affected. H.R. 11896, 92d Cong., 2d Sess. § 402(d)(2) (1972), reprinted in 118 Cong. Rec. 10804, 10824 (1972); 1 *Legis. Hist.*, *supra*, 893, 1058-1059. In part, the Act incorporates the provisions of both S. 2770 and H.R. 11896. See note 17, *supra*.

The House provision was intended as a state-permit analogue to the provisions of H.R. 11896, *supra*, § 401, which requires every applicant for a federal license to secure a statement from the appropriate state to the effect that no applicable effluent limitation will be violated by the activity for which the license is sought. See H.R. Rep. No. 92-911, 92d Cong., 2d Sess., reprinted in *Legis. Hist.*, *supra*, 753, 808-814. Concerning H.R. 11896, § 402(d)(2), the House Committee explained:

The committee has included this procedure to protect States which might otherwise be affected by the issuance of a permit in a second State. This is similar to the safeguards given to States in the certification procedure under section 401. However, since permits granted by States under section 402 are not Federal permits—but State permits—the certification procedures are not applicable.

*Id.* at 814. As noted above the House specifically rejected the permit-by-permit review approach of the Senate bill, in favor of giving the individual states "maximum responsibility for the permit program." See *id.* See also the discussion of the 1977 amendments to the veto provisions, *infra*.

For more detailed discussions of the legislative history of the veto provisions see *Save the Bay v. Administrator of the Environmental Protection Agency*, 556 F.2d 1282, 1284-1287 (5th Cir. 1977); *Mianus River Preservation Committee v. Administrator of EPA*, 541 F.2d 899, 906-909 (2d Cir. 1976).



The 1972 Act also substantially modified enforcement procedures. "Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of any condition or limitation" imposed under the Act, including those contained in state-issued discharge permits, he may at his option "issue an order requiring such person to comply," commence a civil action for appropriate relief in a federal district court, or notify the appropriate state agency of the violation. §§ 309(a)(1), (3), (b). If the latter course is chosen and after 30 days the state agency had not taken appropriate action to secure compliance, the Administrator must exercise one of the first two options. § 309(a). Criminal and civil penalties are provided in §§ 309(c) and (d).

In accord with the stated policy of encouraging "[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established" under the Act, § 101(e), Congress authorized any "person . . . having an interest which is or may be affected" to file a civil action to secure compliance with the Act against any person alleged to be in violation of the provisions of the Act or against the Administrator if he fails to perform any nondiscretionary duty under the Act. §§ 505(a), (g).<sup>19</sup> But "[n]othing in [§ 505] shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a State agency)." § 505(e).

<sup>19</sup> Also, the governor of a state may file a civil action against the Administrator "where there is alleged a failure of the Administrator to enforce an effluent standard or limitation under this Act the violation of which is occurring in another State and is causing an adverse effect on the public health or welfare in his State, or is causing a violation of any water quality requirement in his State." § 505(h).



### 3. *The 1977 Amendments.*<sup>20</sup>

The 1977 amendments are fairly extensive, but of limited significance for our purposes. In them Congress modified the National Pollutant Discharge Elimination System to provide that when EPA objects to the issuance of a permit, it must also state "the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator." § 65(b), 91 Stat. 1599, as amended, 33 U.S.C.A. § 1342(d)(2). A procedure was provided to avoid the impasse that had been possible under the 1972 Act when EPA objected to the issuance of a specific permit but the state agency refused to issue a modified permit; under the amendments, if EPA "objects to the issuance of a permit," the issuing state is entitled to a public hearing on the objection." § 65(a), 91 Stat. 1599, as amended 33 U.S.C.A. § 1342(d)(4); see S.Rep.No. 95-370, 95th Cong., 1st Sess. 73, reprinted in [1977] *U.S. Code Cong. & Ad. News* 4326, 4398; H.R. Rep. No. 95-830, 95th Cong., 1st Sess. 96-97, reprinted in [1977] *U.S. Code Cong. & Ad. News* 4424, 4471-4472. If the state either fails to request a hearing within 90 days of the objection or fails to submit a revised permit meeting the objection, then EPA may issue a permit itself "in accordance with the guidelines and requirements" of the Act § 65(a), *supra*.

Congress also adopted provisions authorizing EPA, with the concurrence of the State in which the point source is located, under limited circumstances, to modify the dates by which the effluent levels established in the 1972 Act for all point sources must be met. See §§ 43, 44, 45, 91 Stat. 1583-1586, as amended, 33 U.S.C.A. §§ 1311(g), (h), (i). The provisions applicable to modification of compliance dates for publicly owned treatment works are of particular significance here. Where construction is necessary for compliance with the "secondary treatment"

<sup>20</sup> Clean Water Act of 1977, P.L. 95-217, 91 Stat. 1566 (to be codified 33 U.S.C. §§ 1251 *et seq.*).

or "more stringent" requirements of the 1972 Act, §§ 301(b)(1)(B), (VC), but cannot be completed in time to meet these requirements or "the United States has failed to make financial assistance . . . available in time to achieve such limitations . . .," EPA or the appropriate state agency may extend the compliance date to July 1, 1983. § 45, 91 Stat. 1584-1585, as amended, 33 U.S.C.A. § 1311(i). The language and legislative history of this provision, however, make it clear that the maximum compliance possible at the time must be achieved throughout the period and complete compliance achieved at the "earliest date practically possible." *Id.*; S. Rep. No. 95-370, 95th Cong., 1st Sess. 47, reprinted in [1977] *U.S. Code Cong. & Ad. News* at 4372. The 1977 amendments also provide for pollutant-specific modifications of the requirements of the 1972 Act. § 44, 91 Stat. 1584, as amended, 33 U.S.C.A. § 1311(h). Upon an adequate showing that, among other things, "there is an applicable water quality standard specific to the pollutant for which the modification is requested" and the modification would "not interfere with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection . . . of a balanced . . . population of shellfish, fish, and wildlife, and allows recreational activities, in or on the water . . .," EPA, "with the concurrence of the State, may issue a permit . . . which modifies the secondary treatment effluent limitations prescribed under the Act for publicly owned treatment works." *Id.*

The only other provision of the 1977 amendments that is of significance for our purposes directs EPA to conduct a study and report to Congress on "the status of combined sewer overflows in municipal treatment works operations." § 70, 91 Stat. 1608, as amended, 33 U.S.C.A. § 1375(c). The Senate committee studying the proposed legislation noted that "the second largest category of municipal needs identified in the 1976 National needs list is the correction of combined sewer overflows . . . . Examples brought to the committee's attention showed com-

bined sewer overflow problems to be a significant source of untreated sewage to the Nation's waters." S. Rep. No. 95-370, *supra*, 81, reprinted in [1977] *U.S. Code Cong. & Ad. News, supra*, 4406. One of the purposes of the report is to determine whether new legislation to address the problem is needed. § 70, 91 Stat. 1608, as amended, 33 U.S.C.A. § 1375(c).

*B. Preemption and Compliance with the Statute As a Defense*

Congress has thus established a comprehensive and detailed system for the regulation and eventual elimination of pollutant discharges into the nation's waters. Nevertheless, Congress has expressly stated that the effluent limitations imposed under the Act do not preclude the establishment of more stringent limitations by any state, § 510, *see United States Steel Corp. v. Train, supra*, 556 F.2d at 835-836, 837-838; and nothing in the Act is to be construed as "limiting the authority of any officer or agency of the United States under any other law or regulation not inconsistent with [the] Act; . . . ." § 511(a). The language of § 511(a) is arguably broad enough to include the federal courts and, when read in the light of § 510, suggests, if it does not require, the conclusion that Congress did not intend to preempt the federal common law of nuisance. The imposition of effluent limitations more stringent than those required under the Act, if necessary to prevent harm to a complaining party, is fully consistent with the provisions of the Act. Because of the shared authority between the federal government and the individual states established in the Act, it is plain that uniformity was not thought necessary. Even the minimum effluent limitations prescribed in the Act are not uniform because the provisions for the ad hoc modification of the degree of compliance required for specific point sources will necessarily lead to variation.

While providing in § 505 for private suits to enforce the effluent limitations prescribed in the Act, Congress specifically stated that nothing in the section "shall restrict any

right which any person . . . may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief . . . ,” thus indicating that preemption of existing remedies was not intended. There is nothing in the phrase “any statute or common law” that suggests that this provision is limited to state common law. There is no reason to believe that Congress would have wished to preserve state common law claims and preclude federal common law claims. The preservation of all existing remedies is consistent with the recognition in this Act of the value of public participation in all aspects of the effort “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” exemplified by the direction to EPA and states participating in the national discharge permit system to encourage such participation. *See also Citizens for a Better Environment v. EPA*, .... F.2d ....., .... (7th Cir. 1979). We conclude that the federal common law of nuisance has not been preempted by the Act.

For the same reasons, we reject defendants’ contention that compliance with a discharge permit issued under the Act is a defense in an action based on the federal common law of nuisance. *Cf. New York v. New Jersey*, 256 U.S. 296, 308 (1921) (in which the Court noted a construction permit issued by the Secretary of War, presumably under the provisions of the Rivers and Harbors Act of 1899 that were replaced by § 402 of the 1972 Act, see note 16, *supra*, incorporating discharge limitations adopted in a settlement agreement with United States but did not regard the limitations as dispositive in New York’s action against New Jersey); *Baltimore & Potomac R. Co. v. Fifth Baptist Church*, 108 U.S. 317 (1881) (rejecting the defendant railroad’s arguments that compliance with District of Columbia smoke stack regulations, the existence of a federal charter authorizing defendants to “make and construct all works whatever which might be necessary and expedient,” or congressional approval of the train route constituted a defense in a nuisance action when plaintiff suffered injury resulting from defendant’s

activity).<sup>21</sup> But compare *Pennsylvania v. Wheeling & Belmont Bridge Co.*, 13 How. (54 U.S.) 518 (1851) with *Pennsylvania v. Wheeling Bridge Co.*, 18 How. (59 U.S.) 421 (1856) and *Northern Transportation Co. v. Chicago*, 9 Otto (99 U.S.) 635 (1879).

### C. Limitations on Relief

Defendants contend that even if the Act does not preempt the federal common law of nuisance, and even if compliance with the Act is not a defense, no more stringent relief can be granted by way of abatement than the federal minimum prescribed by the Act and EPA. In other words, although the federal government need not speak with a single voice, the words must be the same. As noted above, however, Congress has expressly stated that nothing in the Act should be read to limit the authority of any federal "officer or agency" so long as that authority is consistent with the provisions of the Act.

<sup>21</sup> The law of Wisconsin is in accord. See, e.g., *Winchell v. Waukesha*, 110 Wis. 101, 85 N.W. 668, 670 (1901) ("The great weight of authority, American and English, supports the view that legislative authority to install a sewer system carries no implication of authority to create or maintain a nuisance. . . . If such nuisance be created, the same remedies may be invoked as if the perpetrator were an individual."); *Costas v. City of Fond du Lac*, 24 Wis. 2d 409, 415-416, 129 N.W.2d 217, 220-221 (1964) (operation of sewage plant in accord with state specifications, orders, and regulations is no defense in nuisance actions). For other state cases to the same effect, see, e.g., *People of the State of California v. Los Angeles*, 160 Cal. App. 2d 494, 505-506, 325 P.2d 639, 645 (Ct. App. 1958); cases cited in Annotation, "Sewage Disposal Plant as Nuisance," 40 ALR 2d 1177, 1182-1186 (1955), Later Case Service, 40 ALR 2d 77, 77 (1969), Later Case Service Supp. 42, 42 (1978); cases cited in Annotation, "Right to, and Propriety of Injunction Against Nuisance for Discharge of City Sewage," 77 L.Ed. 1213, 1227-1231 (1933); cases cited in Davis, "Theories of Water Pollution Litigation," 1971 Wis. L. Rev. 738, 768 n. 138, 771 n. 148 (1971); cf. *Venuto v. Owens Corning Fiberglass*, 22 Cal. App. 3d 116, 128-129, 99 Cal. Rptr. 350, 358-359 (1971) (air pollution).



Consistency does not require uniformity; the provision expressly preserving the authority of the states to impose limitations more stringent than those required under the Act, § 510, indicates that Congress did not think more stringent limitations inconsistent with the Act. Moreover, the savings clause, § 505(e), speaks not only of rights, but also of remedies. Since any effluent limitations less stringent than those provided in the Act, except pursuant to the modification procedures established, are prohibited, § 505(e) must contemplate more stringent limitations than those imposed in the Act. If accepted, defendants' argument would reduce a cause of action under the federal common law to no more than an alternative avenue for enforcement of the statute. For the reasons stated above, we do not think that Congress intended any such restriction or that the statute, fairly read, limits the relief available in a federal court.

#### D. *Common Law of the Statute*

The conclusion that the Federal Water Pollution Control Act, as amended, does not preempt the federal common law of nuisance or limit the relief available in this case does not render that Act irrelevant. A statute that does not by its terms govern the case before a court may contain indications of the legislature's judgment on relevant issues of policy or provide an appropriate principle for decision of the case.<sup>22</sup> In applying the federal common law of nuisance in a water pollution case, a court should not ignore the Act but should look to its policies and principles for guidance. See *Illinois v. Milwaukee*,

<sup>22</sup> See, e.g., *Moragne v. States Marine Lines*, 398 U.S. 375, 390-393, 406-408 (1970); Landis, "Statutes and the Sources of Law," *Harvard Legal Essays* 213 (1934), reprinted in 2 *Harv. J. Legis.* 7, 12-19, 21-22 (1965); Page, "Statutes as Common Law Principles," 1944 *Wis. L. Rev.* 175, 186-211; Schaefer, "Precedent and Policy," 34 *U. Chi. L. Rev.* 3, 20-22 (1966); Stone, "The Common Law in the United States," 50 *Harv. L. Rev.* 4, 14-15 (1936); Traynor, "Statutes Revolving in Common-Law Orbits," 17 *Cath. U. L. Rev.* 401, 403-408, 412-417, 421-424 (1968).

*supra*, 406 U.S. at 103 n.5; cf. *Textile Workers v. Lincoln Mills*, 353 U.S. 448, 456-457 (1957).

The Act contains no rules or principles that control in this case. We think, however, that the minimum treatment standards found acceptable by Congress and the effluent limitations imposed under the system established in the Act provide an appropriate starting point. Cf., e.g., *Wallis v. Pan American Petroleum*, 384 U.S. 63, 69 (1966). In the 1972 Act, Congress said that by July 1, 1977, publicly owned treatment works must, with several significant exceptions, adopt "secondary" treatment. That command was qualified by the 1977 amendments authorizing EPA or the appropriate state agency to extend the time for compliance with the secondary treatment standard to July 1, 1983. The Act's generally more stringent second stage provisions only require "the application of the best practicable waste treatment technology over the life of the works . . .," by July 1, 1983, §§ 301(b)(2)(B), 201(g)(2)(A) (emphasis added). Thus, Congress has approved secondary treatment as an acceptable minimum for publicly owned treatment works at least until 1983 and perhaps later.<sup>23</sup>

<sup>23</sup> Comparison of the treatment levels demanded of publicly owned treatment works and those demanded of all other point sources suggests that Congress was of the view that publicly owned treatment works should be subject to less stringent standards than other point sources. Point sources other than publicly owned treatment works were required to implement the "best practicable control technology currently available," as determined by EPA, by July 1, 1977. § 301(b)(1)(A). Senator Muskie, the "principal author of the Act," see *American Meat Institute v. EPA*, *supra*, 526 F.2d at 451, expressed the view that although EPA had authority to define "best practicable" as "the equivalent of secondary treatment for industry," more stringent requirements might also be imposed, 1 *Legislative History of the Water Pollution Control Act Amendments of 1972* 167-170 (1973), quoted in *American Meat Institute v. EPA*, *supra*, 526 F.2d at 453. The 1972 Act required point sources other than publicly owned treatment works to implement "best available treatment" by 1983, § 301(b)(2)(A); the 1977 amendments modified this provision to require "best conventional

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EPA has defined secondary treatment for the purposes of the Act in terms of resulting effluent quality. 40 C.F.R. § 133.102. Even though states are authorized to establish more stringent effluent limitations than those required by EPA, §§ 402, 510, there appear to be no Wisconsin regulations imposing more stringent standards and the NPDES permits issued by the Wisconsin agency to the defendants in this case impose limitations no more stringent than those required by EPA.<sup>24</sup>

As we shall explain in more detail below, the effluent limitations contained in the permits are less stringent than those imposed by the district court in this case. In addition, the permits contain no prohibitions against discharges of raw sewage through overflows.

While it is appropriate to give weight to Congress' expectations in adopting the Act and the standards established by EPA pursuant to the Act, we cannot forget that Congress deliberately chose to preserve existing rights and remedies. Thus, if the evidence in this case shows that requirements more stringent than those imposed in the NPDES permits are necessary to protect Illinois residents from harm caused or threatened by the defendants' sewage discharges, plaintiffs are entitled to have the more stringent requirements imposed. We can think of no other reason for Congress' preserving previously existing rights and remedies than to protect the interests

<sup>23</sup> *continued*

treatment" for pollutants identified by EPA as "conventional" by July 1, 1984, and "best available treatment" for other pollutants, no later than July 1, 1987, § 42, 91 Stat. 1582-1583, as amended, 33 U.S.C.A. §§ 1311(b)(2)(A), (E), (F).

<sup>24</sup> EPA had not vetoed the permits issued by the Wisconsin agency. See notes 17 and 18, *supra*, and accompanying text. Before filing this action, Illinois invoked the enforcement procedures of the pre-1972 Act, see, Note, "Federal Common Law in Interstate Disputes," *supra*, 1973 U. Ill. L. F. at 144 & nn. 17-19, but apparently chose not to pursue the remedy provided in § 402(b)(5) and did not attempt to have EPA veto the permits issued to the defendants under § 402(d)(2)(A).

of those who would be able to show that the requirements imposed pursuant to the federal statute are inadequate to protect their interests. When the complaining party is a neighboring state, the federal common law of nuisance provides a peculiarly appropriate remedy.<sup>25</sup>

### III.

#### *Elements of the Claim, Relief, and Standard of Proof*

The elements of a claim based on the federal common law of nuisance are simply that the defendant is carrying on an activity that is causing an injury or significant threat of injury to some cognizable interest of the complainant. See *Georgia v. Tennessee Copper*, 206 U.S. 230, 238-239 (1907).

It has been said that "in such a suit traditional limitations on equitable remedies are applicable." *United States v. Stoeco Homes*, 498 F.2d 597, 611 (3d Cir. 1974). This would mean that an injunction would be granted only when the right to relief is clear and the remedy at law inadequate. *Missouri v. Illinois*, 180 U.S. 208, 248 (1901); *Wright & Miller*, 11 *Federal Practice and Procedure* § 2942, 364, 368-369 (1973); see also *Mugler v. Kansas*, 123 U.S. 623, 672-673 (1887).<sup>26</sup> But when a state complains of

<sup>25</sup> Although the Administrator's power to veto permits that will result in harm to the waters of a second state provides some protection, as noted above, his authority may be limited to those cases in which the complaining state can point to some applicable effluent limitation or water quality standard that will be violated. Furthermore, the Administrator's power to waive review of permits issued to any category of point sources may render any protection that is provided by the veto provisions illusory. §§ 402(d)(3), (e), (f).

<sup>26</sup> For state law cases to the same effect see, e.g., *Green v. Smith*, 231 Ark. 94, 96, 328 S.W.2d 357, 359 (1959); *Delaware Optometric Association v. Sherwood*, 35 Del. Ch. 507, 511, 122 A.2d 424, 427 (1956); *City of Pana v. Central Washed Coal Co.*, 260 Ill. 111, 122-123, 102 N.E.2d 992, 997 (1932); *City of Chicago v. Com-*

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pollution originating outside its territory the rules are different:

If the state has a case at all, it is somewhat more certainly entitled to specific relief than a private party might be . . . .

It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted . . . by the act of persons beyond its control . . . . If any such demand is to be enforced this must be, notwithstanding the hesitation that we might feel if the suit were between private parties, and the doubt whether, for the injuries which they might be suffering to their property they should not be left to an action at law.

*Georgia v. Tennessee Copper*, *supra*, 206 U.S. at 237-238. Moreover, when the polluting activity is shown to endanger the public health, injunctive relief is generally appropriate. *See Harrison v. Indiana Auto Shredders Co.*, 528 F.2d 1107, 1122-1123 (7th Cir. 1976) (diversity case applying Indiana law).

Similarly, while determining whether to issue an injunction generally involves a balancing of the interests of the parties,<sup>27</sup> *Wright & Miller*, *supra*, § 2942 at 366-367 & n.43, the balance is of less importance when the plaintiff is a sovereign state. *See Georgia v. Tennessee Copper*, *supra*, 206 U.S. at 238. And if the pollution endangers the public health, injunctive relief is proper, without resort

<sup>26</sup> *continued*

*monwealth Edison Company*, 24 Ill. App. 3d 624, 632, 321 N.E.2d 412, 418 (1974); *Harden Chevrolet v. Pickaway Grain Co.*, 27 Ohio Ops. 144, 147, 194 N.E.2d 177, 180 (Ct.C.Pl. Ohio 1961); *Wade v. Fuller*, 12 Utah 2d 299, 301, 365 P.2d 802, 804 (1961).

<sup>27</sup> For state law cases using this balancing test, *see, e.g.*, Davis, "Theories of Water Pollution Litigation," 1971 Wis. L. Rev. 738, 766-767 n. 130; *see also Harrison v. Indiana Auto*, *supra*, 528 F.2d at 1123 (diversity case). Wisconsin courts apparently do not use the test. Davis, *supra*, at 767-768 n. 134.



to any balancing. See *Harrison v. Indiana Auto*, *supra*, 528 F.2d at 1122-1123.

In exercising its original jurisdiction in interstate pollution cases, the Supreme Court has applied a preponderance of the evidence standard when the defendant is a private party, *Georgia v. Tennessee Copper*, *supra*, 206 U.S. at 238-239, but a clear and convincing evidence standard when the defendant is a state, *New York v. New Jersey*, 256 U.S. 296, 309 (1921); *Missouri v. Illinois*, 200 U.S. 496, 520-522 (1906).<sup>28</sup> In both *New York v. New Jersey* and *Missouri v. Illinois*, *supra*, 200 U.S. at 520-522, use of the higher standard was attributed to the sovereign status of the defendant. For example, in *New York v. New Jersey* the Court explained that

the burden upon the state of New York of sustaining the allegations of its bill is much greater than that imposed upon a complainant in an ordinary suit between private parties. Before this court can be moved to exercise its extraordinary power under the Constitution to control the conduct of one state at the suit of another, the threatened invasion of rights must be of serious magnitude and it must be established by clear and convincing evidence.

*New York v. New Jersey*, *supra*, 256 U.S. at 309. Justice Harlan's opinion for the Court in *Ohio v. Wyandotte Chemicals*, *supra*, 401 U.S. at 501-502, 504-505, however, suggests that use of the higher standard was a part of an accommodation devised to enable the Supreme Court structured as it is "to perform as an appellate tribunal," *id.* at 498, to cope with original actions in that Court involving interstate disputes regarding air and water pollution.<sup>29</sup> He also indicated that the higher standard of proof

<sup>28</sup> See also *Missouri v. Illinois*, *supra*, 180 U.S. at 248.

<sup>29</sup> The complementary part of the accommodation was that the Court imposed on itself "the duty of applying only legal principles 'which [it] is prepared to maintain against all considerations on the other side. . . .'" *Id.* at 501.

might be appropriate in original actions against private defendants as well. *Id.* at 501 n.4. Justice Harlan's rationale for requiring the higher standard of proof is inapplicable when the action is tried in a trial court; and the alternative, sovereign state rationale recognized in the earlier cases is inapplicable here, *cf. Illinois v. Milwaukee, supra*, 406 U.S. at 98 (political subdivisions of a state are not "States" as used in 28 U.S.C. § 1251(a)(1), see note 6, *supra*). Accordingly, we think the correct standard of proof in this case is a preponderance of the evidence<sup>30</sup> rather than clear and convincing evidence, although we can say, as did the district court, that use of either standard would produce the same result.

#### IV.

#### *Sufficiency of the Evidence Supporting Findings of Fact*

The district court found that the defendants dump substantial quantities of pathogen-containing sewage into Lake Michigan each year, that the lake currents carry the pathogens into Illinois waters, where they may infect drinking water supplies and pose a danger to swimmers, and therefore that defendants' actions pose a significant risk of injury to Illinois residents. These findings are not clearly erroneous. Rule 52, Fed. R. Civ. P. The evidence supporting the findings, which we have carefully reviewed,<sup>31</sup> may be summarized as follows:

<sup>30</sup> Although federal law governs, we note that some state courts have also adopted the preponderance standard in nuisance cases. *See, e.g., City of Northlake v. City of Elmhurst*, 41 Ill. App. 2d 190, 197, 190 N.E.2d 375, 379 (1963); *Iowa v. Miller*, 250 Ia. 1369, 1373, 98 N.W.2d 859, 860 (1959); *Findley Lake Property Owners v. Town of Mina*, 31 Misc.2d 356, 154 N.Y.S. 2d 775, 795 (N.Y.Sup.Ct. 1956); *Welborn v. Page*, 247 S.C. 554, 563, 148 S.E. 2d 375, 379 (1966); *see also Boller v. Texas Eastern Transmission*, 87 F.Supp. 603, 605 (E.D. Mo. 1949) (diversity case).

<sup>31</sup> In an unpublished order filed with this opinion we discuss the evidentiary support for the district court's findings of fact in

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Any population as large as Milwaukee's will include carriers of enteroviruses,<sup>32</sup> who will excrete the viruses. Therefore the sewage of a city as large as Milwaukee inevitably contains these viruses. Similarly, the sewage of any large city will also contain pathogenic bacteria.

The sewer systems defendants operate have a total of approximately 239 bypass or overflow points from which untreated sewage escapes to flow directly or indirectly into Lake Michigan or into rivers that empty into the lake.<sup>33</sup> Most of these overflow points are either pumping

<sup>31</sup> *continued*

detail. Since this factual discussion is of little precedential value, we omit it from this opinion in favor of a short summary. See Circuit Rule 35.

<sup>32</sup> Enteroviruses, sometimes referred to as enteric viruses, are those that inhabit the gastroenteric tract of human beings. Many of these viruses are pathogenic, causing diseases such as polio, pleurodynia, myocarditis, meningitis, and encephalitis.

<sup>33</sup> Both of the defendant commissions act as agents of the Metropolitan Sewerage District of the County of Milwaukee, a municipal corporation that holds title to all property acquired by either commission but is not a defendant in this case. The city commission is responsible for "disposal of the sanitary and industrial sewage generated within the City of Milwaukee and to this end has established and maintained a system of intercepting sewers within the City and . . . operates the Jones Island and South Shore treatment plants; . . ." The county commission is responsible for "collection and transportation of sanitary and industrial sewage from outside . . . Milwaukee but within the service area of the Metropolitan Sewerage District . . . for disposal at the Jones Island and South Shore treatment plants, all subject to approval by the City Commission; . . ." See generally *Wis. Stat. Ann.* § 59.96(6) (West). The City of Milwaukee seems to be solely responsible for the sewers within its boundaries, other than the intercepting sewers.

There are 18 bypass points and 31 overflow points on the Metropolitan (or Main) Interceptor System, which is the network of sanitary sewers in the Milwaukee metropolitan area that carries sewage to the Jones Island and South Shore treatment plants. Sewage generated in the 26 municipalities within the area first flows into a "lateral sewer" and from there into "local collector sewers," which connect with the Metropolitan Interceptor System.

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stations or what are called "gravity overflows." Both types are triggered by the level of sewage in the system. In the former, pumps are activated by electrodes inside the sewer when the sewage flow reaches the level of the electrodes; when the pumps are activated, raw sewage is either pumped into storm sewers, which empty into rivers that in turn empty into Lake Michigan, or dumped directly into the rivers. The gravity overflows are simply pipes placed inside the sewers; when the sewage level rises to that of the pipes, raw sewage pours out into either storm sewers or rivers and then into Lake Michigan. Since both types of overflow points are activated by the level of sewage, an overload or a blockage in the sewers that causes the sewage level to rise will cause overflows, even if the sewer capacity would otherwise be adequate. Because ground water and water from storm sewers sometimes "infiltrates" or flows into sanitary sewers, overflows from the sanitary sewers, as well as from combined sewers, are especially likely during wet weather. In a single month in 1976 the untreated sewage discharged from just 11 of the 239 overflow points totalled 646.46 million gallons.

In addition to the pathogens in the raw sewage that the defendants dump into Lake Michigan, pathogens are contained in the effluent that the South Shore and Jones Island treatment plants discharge directly and indirectly into Lake Michigan<sup>34</sup> when treatment of sewage at those plants is inadequate, as it has sometimes been. Biochemical oxygen demand (BOD),<sup>35</sup> as an indicator of the pres-

<sup>33</sup> *continued*

There are 78 overflow points (called "crossovers") on Milwaukee's sanitary sewer system and 112 overflow points on the city's combination storm water and sanitary sewer system (called combined sewer overflows).

<sup>34</sup> South Shore effluent is discharged into Lake Michigan, but Jones Island effluent is discharged into the Milwaukee Harbor and from there flows into Lake Michigan.

<sup>35</sup> Biochemical oxygen demand (BOD) is an "index of the biodegradable organics present in the effluent." *Standard Methods*

(Footnote continued on following page)

ence of organic material, and the presence of suspended solids<sup>36</sup> are both significant factors in evaluating the adequacy of sewage treatment, especially as to virus and bacteria elimination.<sup>37</sup> EPA regulations and the discharge permits issued by the Wisconsin Department of Natural Resources for the Jones Island and South Shore plants require that the average daily BOD<sub>5</sub> (see note 35, *supra*) and suspended solids content of the effluent not exceed 30 milligrams per liter (mg/l) in any 30-day period. Not only were the 30-day average daily limitations frequently violated at Jones Island and South Shore, but also, on occasion, even if these limitations were met, discharges on individual days greatly exceeded the 30 mg/l limitation.<sup>38</sup>

The evidence established that, at temperatures between 40 and 70 degrees Fahrenheit, 90% of the bacteria discharged on any given day will generally "die-off" within two to four days, although they can survive for four to eight days. But, at temperatures between 40 and 50 de-

<sup>35</sup> *continued*

for the *Examination of Water and Wastewater*, 513, 544 (14th ed. 1975). BOD is generally "measured over a five-day period," *American Meat Institute v. EPA*, *supra*, 526 F.2d at 447, hence the abbreviation BOD<sub>5</sub>.

<sup>36</sup> As the term suggests, "suspended solids" are "particles of organic and inorganic matter suspended in the water or floating on its surface," *American Meat Institute v. EPA*, *supra*, 526 F.2d at 447.

<sup>37</sup> Chlorine, contained in hypochlorous acid, is one of the most common disinfectants used in sewage treatment and is the only disinfectant used at either Jones Island or South Shore. Ammonia or nitrogen in organic material reacts with chlorine to form compounds that are either ineffective or less effective than hypochlorous acid as viricides and bactericides. Viruses or bacteria embedded in suspended solids, organic or inorganic, will be protected from effective chlorination.

<sup>38</sup> Both EPA regulations and the discharge permits impose seven-day daily average BOD<sub>5</sub> and suspended solids limitations of 45 mg/l. We note that on some occasions the defendants' individual day discharges absolutely precluded meeting the seven-day daily average.



degrees Fahrenheit, viruses will survive for months; even at 70 degrees, a temperature rarely reached by Lake Michigan except in July and August, viruses will survive for about two weeks. All of the witnesses who testified concerning the transport of pathogens discharged at Milwaukee into Illinois waters agreed that the southerly currents were strong enough and persisted long enough to carry the pathogens into Illinois waters in less than four days. They differed only as to the number of times that this could be expected to occur in a given year.

Pathogens discharged at Milwaukee will sometimes be carried into Illinois waters close enough to shore to come in contact with swimmers and to be taken in by water treatment plants. A swimmer can be infected by getting contaminated water into his mouth or nose or on a cut or abrasion on the skin. Drinking water can be contaminated by viruses or bacteria in lake water if a water treatment plant malfunctions because of human error or mechanical breakdown. Furthermore, there was evidence that viruses and bacteria can survive the treatment at a drinking water plant, even in the absence of error or breakdown. If viruses or bacteria contaminate the drinking water supplies, Illinois residents ingesting the water can of course become infected.

Defendants estimate that the effluent from Jones Island and South Shore contains about 1,100,000 pounds of phosphorus each year; the phosphorus content of defendants' raw sewage discharges is unmeasured. The district court found that this constituted a substantial contribution to the accelerated eutrophication of the water in the western in-shore zone of Lake Michigan, within the territorial boundaries of the State of Illinois, and also found that the State of Michigan was injured by accelerated eutrophication, aggravated by defendants' discharges.<sup>39</sup>

<sup>39</sup> "Eutrophication" is a natural process, and refers to the gradual increase of nutrient concentration in a body of water, which in turn causes increasing concentrations of phytoplankton and other

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## V.

*Sufficiency of the Evidence  
Supporting the Relief Granted*

A. *Relief Granted by the District Court*

The district court's judgment order requires the defendants to eliminate all overflows, defined as any "cross-over, bypass, diversion structure, relief structure, pump station or any other device or mechanism by which human fecal waste is discharged directly or indirectly to public streams, rivers or lakes without collection and treatment," located outside the combined sewer system area by July 1, 1986. [Appendix 2.] As to the 112 combined sewer overflows, the defendants must construct a collection and conveyance system with a storage capacity of 2605 acre-feet<sup>40</sup> by December 31, 1989. Any overflow from this collection and conveyance system must receive minimum "treatment" consisting of "bar screen" filtering, followed by "drum screen" filtering, and chlorination. [App. at 5.] Defendants must either modify existing sewage treatment facilities or construct new facilities to treat all sewage, including that collected in the combined sewer collection and conveyance system, in order to meet the following effluent limitations by December 13, 1986:

- (1) based on 30 consecutive daily samples, an average of 5 mg/l suspended solids, provided that no single sample exceed 10 mg/l suspended solids;

<sup>39</sup> *continued*

living organisms. Man's nutrient inputs may, however, accelerate the evolution. Liminologists regard phosphorus as a "controlling element" in the process. Since phosphorus is necessary to support the growth of phytoplankton, limiting phosphorus imposes an upper limit on the external manifestations of eutrophication, which include reduction of clarity and oxygen content, production of obnoxious odors, and reduction of the quality of drinking water supplies.

<sup>40</sup> An "acre-foot" is "the volume that would cover one acre to a depth of one foot." Webster's *Third New International Dictionary* (unabridged) 19 (1971).

(2) based on 30 consecutive daily samples, an average of 5 mg/1 BOD<sub>5</sub>, provided that no single sample exceed 10 mg/1 BOD<sub>5</sub>;

(3) based on daily samples, a free chlorine residual after 15 minutes exposure using the amperometric test;

(4) based on daily grab samples, fecal coliform counts not exceeding 40/100 ml; and

(5) based on daily sampling, a monthly average of 1 mg/1 phosphorus. [App. at 6-7.]

The order also provides for evidentiary hearings to secure modifications of the order or to determine whether the provisions of the order have been violated. In any such hearing the defendants must bear the burden of proving by a preponderance of the evidence that the modification is necessary or that any alleged violation of the order did not occur or was excused.

### B. *Overflows*

That part of the district court's order requiring defendants to eliminate all overflows outside the combined sewer system by July 1, 1986 and to construct a collection and conveyance system for the combined sewer system that will practically eliminate overflows on the combined sewer system by December 31, 1989 is supported by the evidence and is reasonable.

#### 1. *Overflows Outside the Combined Sewer Area*

There appears to be no provisions in the Act or EPA regulations expressly forbidding the discharge of raw sewage into public waters from overflow points. Yet such a prohibition is at least implicit in the provisions of § 301.<sup>41</sup> It would be senseless to prohibit the discharge

<sup>41</sup> See also §§ 212(2)(A), (B), quoted in note 13, *supra*; § 70, 91 Stat. 1608, as amended, 33 U.S.C.A. § 1375(c); S. Rep. No. 95-370, *supra*, at 81, reprinted in [1977] *U.S. Code Cong. & Ad. News*, *supra*, at 4406.

of effluent from publicly owned treatment works not meeting the secondary treatment requirements of § 301(b)(1)(B), if raw sewage can nonetheless be discharged at will from overflow points before it reaches the treatment works. The discharge permits that the Wisconsin agency issued for the South Shore and Jones Island treatment plants prohibit, except under very limited conditions, any "diversion or bypass" of raw sewage *at the treatment works*. [Wisconsin Pollutant Discharge Elimination System Permits (WPDES Permits): WI-0024775, Part I, p.4 of 6 (South Shore), P.Ex. 63; WI-0024767, Part I, p.4 of 6 (Jones Island), P.Ex. 62.] Although the discharge permits do not otherwise prohibit overflow discharges, the permits do require the city commission to "initiate" programs "leading to the elimination or control of all discharge overflow and/or bypass points . . . ." [WPDES Permits: WI-0024775, *supra*, Part II, p.7 of 8; WI-0024767, *supra*, Part II, p.5 of 6.] Under the permits, plans for the elimination or control of overflows were to be submitted to the Wisconsin agency by December 31, 1975. It is not clear from the record whether any plans were submitted, or, if they were, what their terms were and what action was taken.

In any event, the provisions of these permits appear to have been modified. In July, 1976, the defendant commissions filed an action in a Wisconsin state court against the Wisconsin Department of Natural Resources, the state's discharge permit issuing agency, challenging the validity of the requirements of the permits issued for South Shore and Jones Island. The state agency answered asserting the validity of the permit requirements and filed a counterclaim, alleging that the defendant commissions had violated the permit effluent limitations on numerous occasions. The state agency also alleged

that under dry weather and wet weather conditions, bypassing and overflowing occur within the sewerage systems of the Commissions and such discharges must either be eliminated or meet secondary treatment standards by July 1, 1977 . . . .

[*Sewerage Commission of the City of Milwaukee and Metropolitan Sewerage Commission of the County of Milwaukee v. State of Wisconsin Department of Natural Resources*, Stipulation 3 (Wis. Ct. Ct. Case No. 152-342, May 25, 1977), D.Ex. 1311.]

The state court suit was resolved by a settlement agreement, approved by the court on May 25, 1977, in which the sewerage commissions accepted the requirement that they eliminate *dry weather* bypasses and overflows on the Main Interceptor System by July 1, 1982 [*Id.* at 4], and complete construction of relief sewers by July 1, 1983 [*Id.* at 7, 8]. While construction of relief sewers and the other construction contemplated in the agreement presumably is intended to mitigate overflows, there is no specific date by which *wet weather* overflows must be eliminated. The sewerage commissions also agreed to "coordinate" a district-wide effort to "correct" wet weather bypassing and overflows on the separate sewer systems of the municipalities located within the Metropolitan Sewage District of the County of Milwaukee, *see* note 33, *supra*. Under the agreement, any of the 26 municipalities within the district, by adopting a "resolution of commitment to the correction of wet weather related bypassing and overflowing within its sewerage system" becomes subject to the supervision of the commissions, which are required to make sure that all "corrective work" is complete by July 1, 1986. [*Id.* at 8-9, 15.] We need not decide whether modification of discharge permits in this manner complies with the procedural requirements of §§ 402(b)(3), (5), (6) or the substantive requirements of §§ 402(b)(1)(A), (B). For our purposes, it is sufficient that the state agency has condemned raw sewage discharges.

It is doubtful whether anyone, layman or expert, would argue that the discharge of raw sewage into public waters is a satisfactory alternative to collection and treatment of sewage, even though it may be conceded that it may take time to fund and provide collection and treatment facilities, and therefore the raw sewage discharges may have to be endured for the short term. Donald Weiland,



Director of Engineering for the Sewerage Commission of the City of Milwaukee, flatly stated that discharging raw sewage into public waters as a permanent solution to sewage overloads was not "sound sanitary engineering practice":

Q. As a design engineer responsible for designing sewers with adequate hydraulic capacity, do you consider it sound sanitary engineering practice to design and install overflow devices which are intended to permit the discharge of raw sewage as a permanent solution to hydraulic overloads on an interceptor system?

A. Certainly not.

[Tr. 201.] Similarly, Dale Lundy, a hydraulic and sanitary engineering consultant called by plaintiffs, testified that collection and treatment is "considered preferable" to discharge of raw sewage. [Tr. 907.] Defendants point to nothing in the record that would even suggest that the discharge of raw sewage into public waters is either an acceptable long range solution to the problem of disposing of human wastes or a practice that can be regarded as safe.

The "crossover" overflow devices on the city's so-called "separate" system also fall within this aspect of the court's order. Rather than discharging raw sewage directly into public waters, the crossover devices dump the sewage into storm sewers which in turn dump it into the public waters. There may or may not be water in the storm sewers when the crossover devices are activated, and therefore the crossover overflow devices may result in discharges of raw sewage into public waters in precisely the same manner as the overflow devices that dump sewage directly into public waters.<sup>42</sup> We note that the

<sup>42</sup> As to the significance of any dilution that might occur in the storm sewers see the discussion of combined sewer overflows, *infra*.

discharge permit apparently issued to the City of Milwaukee by the Wisconsin agency, as modified, *see* note 33, *supra*, requires the city to "initiate a program leading to the elimination of the sanitary sewer crossovers (gravity) and the electrically operated relief pumps" on the city's "separate" sanitary sewer system "to assure attainment of all applicable Water Quality Standards." [Modification of Wisconsin Pollutant Discharge Permit No. WI-0026875, p.1 of 8 (December 16, 1976), D.Ex. 1110.]

We have seen that, depending on the efficiency of the treatment, even effluent from a treatment plant may contain pathogens that pose a danger to Illinois residents and phosphorus that contributes to the accelerated eutrophication of the lake. Obviously then untreated sewage poses a greater danger. We therefore affirm the district court's order to the extent that it requires defendants to eliminate discharges of untreated sewage outside the combined sewer system area.

## 2. *Overflows Within the Combined Sewer Area*

In considering the city's combined sewer overflows, it is again appropriate to take as a starting point the provisions of the Act. Although there is no provision expressly prohibiting "combined sewer overflows," we think that such a prohibition can be inferred from the general provisions of § 301. For, as noted above, it simply does not make sense to read the statute as authorizing unrestricted discharges of untreated sewage; "dilution" by storm water does not constitute treatment. It seems apparent that the amount of dilution that has taken place when an overflow occurs depends entirely on what the relative volumes of sewage and water in the sewer happen to be at the time of the overflow. The overflow mechanisms do not regulate the amount of dilution or distinguish between pure and diluted sewage. If the total amount of sewage and water introduced into a sewer exceeds its capacity, the excess is discharged into the rivers and the lake; it may be either "diluted" or "undiluted." That the flow from the combined

sewers is supposed to go to the treatment plants suggests that not even the city believes that the dilution in the combined sewers is sufficient to render the discharges harmless.<sup>43</sup>

EPA regulations concerning treatment plants that receive sewage from combined sewers recognize that during wet weather it may be difficult for a treatment plant to meet secondary treatment effluent limitations, but those treatment plants are not exempt from the requirements of the regulations, and "diluted" sewage, like raw sewage, must be treated before being discharged:

Secondary treatment may not be capable of meeting the percentage removal requirements . . . during wet weather in treatment works which receive flows from combined sewers (sewers which are designed to transport both storm water and sanitary sewage). For such treatment works, the decision must be made on a case-by-case basis as to whether any attainable percentage removal level can be defined, and if so, what that level should be.

40 C.F.R. § 133.03(a). Implicit is a recognition that dilution alone is inadequate to protect the receiving waters.

The discharge permit that appears to have been issued to the City of Milwaukee, required the city to "initiate a program leading to the attainment of control of overflows from the City's combined sewer system . . . to assure attainment of all applicable Water Quality Standards." [Modification of Permit No. WI-0026875, *supra*, at p.5 of 8.] Although the City of Milwaukee was not one of the named plaintiffs in the state court litigation referred to above, the settlement agreement appears to modify this provision and to contemplate "completion of construction

<sup>43</sup> See also the expression of concern about combined sewer overflows in the Senate committee report accompanying the 1977 amendments, quoted *supra*; see generally the definition of treatment works, including "waste in combined storm water . . . sewer systems." § 212, quoted *supra*, note 13.

[on the combined sewer system] and achievement of applicable water quality standards by July 1, 1993." [See Stipulation, *supra*, at 10.] Again we need not decide whether a modification accomplished in this way meets the procedural requirements of the Act or whether the terms of the modification meet the substantive requirements of the Act. It is enough that neither Congress nor any agency charged with responsibility under the Act has approved the practice of discharging untreated sewage from a combined sewer system into public waters.

The requirements in the district court's order that the defendants collect and treat the sewage in combined sewers before discharging it directly or indirectly into Lake Michigan is proper in light of the evidence. Defendants concede the feasibility of the completion date requirements. [App. at 16.]

### 3. *Illinois' Regulation of Overflows Within Its Own Jurisdiction*

Defendants attack the overflow elimination provision of the district court's order on the additional ground that Illinois does not even require elimination of sewage overflows within its own jurisdiction. Defendants cite § 602 of the Illinois Pollution Control Board Rules and Regulations, Chapter 3: Water Pollution [P.Ex. 171]. There is precedent, in a case of this kind, for considering the rules of the complaining state as an indication of what is appropriate for the protection of the residents of that state. *Missouri v. Illinois*, *supra*, 200 U.S. at 525-526.<sup>44</sup> The

<sup>44</sup> "Where, as here, the plaintiff has sovereign powers, and deliberately permits discharges similar to those of which it complains, it not only offers a standard to which the defendant has the right to appeal, but, as some of those discharges are . . . [at points where they could cause the injury complained of], it warrants the defendant in demanding the strictest proof that the plaintiff's own conduct does not produce the result, or at least so conduce to it, that courts should not be curious to apportion the blame." 200 U.S. at 525-526.

argument is, on its face, inapplicable to sanitary sewer overflows since Illinois does prohibit those. Illinois Pollution Control Board Rules and Regulations, *supra*, § 602(b) (1976) [P.Ex. 171];<sup>45</sup> consequently, we interpret defendants' argument to be that it was improper to order collection and treatment of sewage in the combined sewer system area.

Section 602(c) does not prohibit combined sewer overflows, but "all dry weather flows, and the first blush of storm flows" must meet applicable effluent limitations, which for Lake Michigan are comparable to those imposed by the district court, and new combined sewers are prohibited. *Id.*, § 602(c)(1).<sup>46</sup> Combined sewer flows equal to ten times the average "dry weather flow" must receive "primary treatment and disinfection with adequate retention time." *Id.*, § 602(c)(2). These requirements seem to be comparable to the treatment of overflows from the collection and conveyance system prescribed by the district court. The Illinois regulations further provide that if necessary to prevent sludge accumulation or oxygen level depression, flows greater than ten times the average "dry weather flow" must be treated by "retention and return to the treatment works or otherwise." *Id.*, § 602(c)(3). Thus, it appears that defendants' only complaint based on a comparison with the Illinois regulations relates to the size of the retention facility required by the court.

<sup>45</sup> Defendants point to one place in Illinois where sewage that has not been fully treated may be discharged into Lake Michigan, *viz.*, Waukegan. At present about twice a year and "ultimately about once a year" some sewage that has only received treatment consisting of 10 hours of sedimentation and chlorination will be discharged into Lake Michigan. [Tr. 13444-13445.] This discharge appears to be in violation of Illinois water pollution regulations, see Reply Memorandum of Plaintiff-Appellee State of Illinois 35, and therefore provides little support for defendants' contention.

<sup>46</sup> The Illinois Pollution Control Board Rules and Regulations require all effluents discharged into Lake Michigan to meet a 5 mg/liter suspended solids standard and a 4 mg/liter BOD<sub>5</sub> standard. Ill. Pollution Control Board Regulations, *supra*, § 404(d) [P.Ex. 171].



The details of the relief to be granted are in a large part matters left to the trial court's discretion; in any event, the defendants do not provide us with evidence sufficient to justify disagreement with what the court found necessary or evidence sufficient to show that the marginal increase in cost of building a facility of the size required by the district court is significantly greater than the cost of building a facility of the size presumably contemplated by defendants. Furthermore, although Illinois permits some combined sewer overflows, it also, unlike the defendants, requires some treatment. The trial court is not limited by the law of the complaining state with respect to each detail of the relief to be granted.

### C. *Effluent Limitations*

Neither the minimum effluent limitations prescribed by EPA pursuant to the provisions of the Act nor the effluent limitations imposed by the Wisconsin agency under the National Pollutant Discharge Elimination System limit a federal court's authority to require compliance with more stringent limitations under the federal common law. Nevertheless, those standards provide guidelines which a court should not ignore.

EPA regulations define "secondary treatment" in terms of resulting effluent quality, in part, as follows:

(a) *Biochemical Oxygen Demand (five-day)*. (1) The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 30 milligrams per liter.

(2) The arithmetic mean of the values for effluent samples collected in a period of 7 consecutive days shall not exceed 45 milligrams per liter.

(3) The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

(b) *Suspended Solids.* (1) The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 30 milligrams per liter.

(2) The arithmetic mean of the values for effluent samples collected in a period of 7 consecutive days shall not exceed 45 milligrams per liter.

(3) The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

40 C.F.R. § 133.102. As noted above, for publicly owned treatment works the Act requires no more than secondary treatment until July 1, 1983, when they must implement the "best practicable waste treatment over the life of the [treatment] works." § 201(g)(2)(A); see § 301(b)(2)(B). While point sources must comply with any more stringent requirements of the states in which they are located, Wisconsin does not appear to have adopted any more stringent limitations; the discharge permits issued to the defendants in this case do not impose any more stringent limitations than those in EPA's regulations.

Both the South Shore and Jones Island plants must meet the following conditions under their discharge permits:

(1) based on daily samples, a monthly average of 30mg/1 BOD<sub>5</sub> and a weekly average of 45mg/1 BOD<sub>5</sub>, provided that neither the monthly nor the weekly average ever exceed 15% of the average BOD<sub>5</sub> content of the influent during the same period (85% removal);

(2) based on daily samples, a monthly average of 30mg/1 suspended solids and a weekly average of 45mg/1 suspended solids, provided that neither the monthly nor the weekly average ever exceed 15% of the average suspended solids content of the influent during the same period (85% removal);

(3) based on twice weekly "grab samples," a monthly average fecal coliform count of 200/100ml and a weekly average fecal coliform count of 400/100ml;

(4) based on daily samples, a monthly average of 1mg/1 phosphorus; and

(5) monitoring of both total residual chlorine and available "free" chlorine in the effluent, but no specific requirements.

[Permit No. WI-0024775 (South Shore) P.Ex. 63; Permit No. WI-0024767 (Jones Island) P.Ex. 62.] All of the effluent limitations imposed by the district court, except the phosphorus limitation, are significantly more stringent than those prescribed by EPA or in the discharge permits: in lieu of 30mg/1 BOD<sub>5</sub> and suspended solids, the district court requires 5mg/1; in lieu of 200 fecal coliform cells per 100ml, the district court requires 40/100ml; in lieu of the monitoring requirement for chlorine, the district court requires a free chlorine residual 15 minutes after exposure. Further, as to BOD<sub>5</sub> and suspended solids, the district court imposes an absolute maximum of 10mg/1 instead of the variable 85% removal requirement in the EPA regulations and the discharge permits.

These effluent limitations imposed by the district court all relate to the hazard presented to Illinois residents by Milwaukee's discharge of sewage containing pathogens. Although aware that these limitations could be consistently met only by constructing what are referred to as "advanced waste treatment" plants, the court found that such treatment was necessary to protect Illinois residents from the danger presented by Milwaukee's discharges. [Tr. 14248-14249.] We are unable to conclude, after a careful examination of the evidence cited by plaintiffs to justify the limitations imposed, that this evidence was sufficient.

We recognize that once liability has been established, a trial court has broad authority to fashion appropriate relief. This rule is particularly applicable in an area of law where the appropriate relief will invariably depend on the circumstances of each case. *See, e.g., Washington*

*v. General Motors Corp.*, 406 U.S. 109, 115-116 (1972). Nevertheless, a court, unlike a legislature or an administrative agency, is not free to rest solely upon what it thinks desirable; there must be evidence to support its conclusion that the relief granted is necessary to protect the complaining party from harm.<sup>47</sup>

To support the 5 mg/1 BOD<sub>5</sub> and suspended solids limitations imposed by the district court, Illinois relies on the testimony of one witness who asserted that even at 30 mg/1 suspended solids "you are going to have a lot of organics tied up with solids that is going to use up your chlorine, and that the chlorine can't even get into." Further, Illinois cites the general testimony that organic matter and suspended solids interfere with effective chlorination and therefore should be reduced as much as possible. Illinois also relies on the testimony of one witness that the kind of treatment required to meet the 5 mg/1 standard is preferable to the kind of treatment now used by the defendants. And finally, Illinois points to evidence that one of the defendants' consultant sanitary engineers recommended treatment comparable to that required to meet the 5 mg/1 standard, that three cities have been required to meet similar limitations, and that several cities have voluntarily decided to modify their own treatment facilities in ways similar to that which would be required under the district court's order.<sup>48</sup>

The evidence shows that suspended solids and organic matter interfere with chlorination, and therefore that there is some correlation between suspended solids and BOD<sub>5</sub> and effective chlorination. The evidence does not,

<sup>47</sup> Cf. *Milliken v. Bradley*, 433 U.S. 267, 280 (1977) ("[L]ike other equitable remedies, the nature of the desegregation remedy is to be determined by the nature and scope of the constitutional violation . . . . The remedy must therefore be related to 'the condition alleged to offend the Constitution . . . .'").

<sup>48</sup> We only summarize the evidence in this opinion; the evidence relied on by Illinois is discussed in detail in the unpublished order filed with this opinion. See note 31, *supra*.

however, show how much more effective chlorination would be at 5mg/1 suspended solids and BOC<sub>5</sub> than at 30mg/1 suspended solids and BOD<sub>5</sub>; the difference may be significant or it may be *de minimis*.<sup>49</sup> [Compare Tr. 12398-12400 with Tr. 13399-13400.]

That a few cities have adopted the more stringent standards is hardly enough to prove that those standards are necessary here, especially when the persons to be protected are many miles down the lakeshore from the discharge points. Cf. Comptroller General of the United States, "Report to Congress: Better Data Collection and Planning is Needed to Justify Advanced Waste Treatment Construction" (1976) [D.Ex. 1105] (pointing out that several cities began construction of advanced waste treatment facilities without adequate consideration of the expected costs and benefits of such facilities).

Our difficulty with the evidence reviewed above is that it consists merely of conclusions of the experts and does not explain why the particular standards are necessary

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<sup>49</sup> Wellings testified that tests had failed to demonstrate any viruses in effluent containing only 5 Jackson Turbidity Units per liter. [Tr. 12399.] But Wellings' work focused primarily on the virus content of effluent from treatment facilities and not on removal efficiencies. [Tr. 13399.] For the purpose of determining whether significant benefits will result from reducing solids and BOD<sub>5</sub> from 30 mg/1 to 5 mg/1, it is not enough to know that tests have shown viruses in effluent from a plant designed to meet the 30 mg/1 standard and similar tests have failed to show viruses in a plant designed to meet the 5 mg/1 standard. Nor is it enough to take random influent samples and random effluent samples, for the virus content of the sewage necessarily varies. Virus content in the influent may be much more significant than the particular solids or BOD<sub>5</sub> level the plant is designed to achieve. Furthermore, the flow rates at the time the tests are conducted are important, for it is virtually meaningless to say that a plant designed to meet the 5 mg/1 standard performs better than an overloaded plant designed to meet the 30 mg/1 standard. [See Tr. 12377-12378 (Wellings).]



to protect the health of Illinois residents.<sup>50</sup> We are asked to accept the conclusions on faith. It is difficult for us to see how the opinion of an expert can be intelligently appraised unless it is supported by reasons. This is especially so when the opinion is offered to support effluent limitations markedly lower than (a) those established by the EPA in its regulations, (b) those established by the state permit authority with the duty of protecting residents in the immediate environs of the discharges, and (c) those established by the complaining state itself for waters other than Lake Michigan.<sup>51</sup> The record is conspicuously silent as to the reasons these less stringent standards were found adequate to protect persons in the immediate environs of the discharges by experts who were presumably as dedicated to the protection of public health and the environment as those on whose conclusions plaintiffs rely, and why those reasons are inapplicable here, especially when the discharges occur at least 25 miles from any of the persons to be protected. In short, plaintiffs point to nothing in the record, and we have found nothing, to connect the effluent limitations imposed by the district court with the protection of Illinois residents. If enforcement

<sup>50</sup> While Wellings, who comes the closest to providing evidentiary support for the suspended solids limitations the court imposed, testified that "the problem with 30 milligrams per liter is you are going to have a lot of organics tied up with solids that is going to use up your chlorine, and the chlorine can't even get into," and there would "still" be "a problem with disinfection," she did not say the same would be true of any figure between thirty and five. She went on to say that she did not "know how she would equate Jackson Turbidity Units [on which her relevant experience was based] with milligrams, . . . because you would have to know size, shape and all that, source, because of the test itself," and then said 5 mg/l "would be well in the ball park," and she "wouldn't want any more than five." This is a speculative and uncertain basis for the court's implied conclusion that effluent limitations specifically adopted by EPA and the Wisconsin agency are insufficient to protect the health of people more than 25 miles from the discharge points. See also note 49, *supra*.

<sup>51</sup> Illinois Pollution Control Board Rules and Regulations, *supra*, § 404 [P.Ex. 171].

of the limitations imposed in the discharge permits proves inadequate to protect Illinois residents, then more stringent limitations may become necessary. But on the record before us, we cannot sustain the district court's order in this respect.<sup>52</sup>

Also relevant to this aspect of the remedy is Congress' treatment of publicly-owned treatment facilities in the 1972 and 1977 amendments to FWPCA. Secondary treatment facilities, which are not capable of meeting the 5 mg/l limitations, are permitted under 33 U.S.C. § 301(b)(1)(B) until July 1, 1983, when "the best practicable waste treatment over the life of the works" becomes the requirement. Although Congress did not attempt to answer the public health questions, leaving them to EPA and state agencies acting under EPA's supervision, the provisions of the Act are at least an indication of Congressional reluctance to risk pushing municipalities beyond the limits of their resources. The 1977 amendments, summarized above, show a deepening concern on this score. Congress' position in the Act does not, as we have held, mark the limits of our power in this common law nuisance action, but the policy underlying that position, to which we should give some deference, is at least a reason not to allow the nature of the action to cause a relaxation

<sup>52</sup> In the statement of facts contained in Illinois' first brief we were told: "Not only does sewage provide the basic element of phosphorus [which is necessary for eutrophication], but also it contains a whole series of nutrients . . . 'a very rich nutrient broth' for aquatic plant growth (Tr. 2889)." Illinois does not, however, attempt to sustain the effluent limitations imposed by the district court on this basis. Indeed, it is not even clear that this "fact" is relevant to the effluent limitations. There does not appear to be any evidence as to the relative "nutrient" content of effluent from treatment works designed to meet the 30 mg/l suspended solids and BOD<sub>5</sub> standards and those designed to meet the 5 mg/l standards. Presumably, the nutrient content of effluent from a plant meeting the 5 mg/l standards is lower than that of a plant meeting the 30 mg/l standards. But whether the difference is significant with respect to eutrophication of Lake Michigan is not clear.

of the requirements of evidentiary foundation that would normally be observed in other kinds of actions.<sup>53</sup>

It is not clear whether the fecal coliform limitation and the free chlorine residual requirement imposed by the district court can be met with secondary treatment. In any event, the record support for these limitations is as deficient as it is for the suspended solid and BOD<sub>5</sub> limitations, and we are provided with no explanation of why such limitations were not included in the NPDES permits for the plants and the federal regulations.<sup>54</sup>

Our treatment of the effluent limitations imposed in the district court's order is not inconsistent with our treatment of the overflow requirements of the order. First, and we think most important, the evidence presented supports the district court's finding that the defendants' discharges of raw sewage, whether diluted or not, pose a significant risk of injury to Illinois residents. Raw sewage contains vastly higher concentrations of pathogens than treated sewage. Millions of gallons of raw sewage are dumped into the water each year from the 239 overflow points on the defendants' sewage systems, most frequently during wet weather, but also during dry weather. Lake currents can and do sometimes carry the pathogens into Illinois waters close to shore.

Second, no one even attempts to justify such discharges as harmless or insignificant. As we have said, it is

<sup>53</sup> Plaintiff also relies on Illinois statutory and common law. The district court indicated that under any of the asserted grounds for relief the result would be the same. [App. 20-21.] But it is federal common law and not state statutory or common law that controls in this case. *Illinois v. Milwaukee*, *supra*, 406 U.S. at 107 & n. 9, and therefore we do not address the state law claims.

<sup>54</sup> In addition we note that Illinois' general effluent standard fecal coliform limitation is 400/100 ml. See Illinois Pollution Control Board Rules and Regulations, *supra*, § 405 [P.Ex. 171]. The "water quality" fecal coliform limitation for Lake Michigan is 20/100 ml. Ill. Pollution Control Board Rules and Regs., *supra*, § 206(d) [P.Ex. 171]. For the effect of a more stringent water quality limitation than effluent limitation see *id.* § 201(a) [P.Ex. 171]. There does not appear to be any effluent limitation specifically requiring a chlorine residual, either "free" or total.

arguable that the Act itself prohibits discharges of raw sewage. The Wisconsin agency has taken steps to eliminate some overflows and to "correct" others although giving the defendants a longer time to take the necessary action than did the district court. But as stated above the defendants have conceded that compliance with the deadlines imposed by the court is feasible.

On the other hand, the evidence supporting the effluent limitations is weak, at best. They are more stringent than those required by Congress, EPA, and the Wisconsin discharge permit issuing agency. And there is no evidence as to why the limitations deemed adequate to protect the inhabitants in the vicinity of the discharges are inadequate to protect the residents of Illinois who are at least 25 miles away.

The phosphorus limitation imposed by the district court can be achieved using secondary treatment; an identical limitation is prescribed in the defendants' discharge permits.<sup>55</sup>

We affirm the district court's order to the extent that it requires the elimination of all sewage overflows and imposes a 1 mg/l phosphorus effluent limitation. We reverse the court's order insofar as it imposes suspended solids, BOD<sub>5</sub>, fecal coliform, and free chlorine residual effluent limitations more stringent than those prescribed in defendants' discharge permits. The case is remanded to the district court with directions to modify the injunctive order in conformity with the rulings of this court.

AFFIRMED IN PART,  
REVERSED AND REMANDED IN PART.

A true Copy:

Teste:

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*Clerk of the United States Court of  
Appeals for the Seventh Circuit*

<sup>55</sup> Illinois' phosphorus effluent standard is 1 mg/l; its water quality standard for Lake Michigan is .007 mg/l. See Illinois Pollution Control Board Rules and Regulations, *supra*, §§ 407, 206(c) [P.Ex. 171].

K-1

## APPENDIX K

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UNITED STATES COURT OF APPEALS  
For the Seventh Circuit  
Chicago, Illinois 60604

ARGUED: May 24, 1978.  
SUBMITTED: October 12, 1978  
April 26, 1979.

Before Hon. THOMAS E. FAIRCHILD, *Chief Judge*  
Hon. PHILIP W. TONE, *Circuit Judge*  
Hon. ROY W. HARPER, *Senior District Judge\**

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PEOPLE OF THE STATE OF ILLINOIS,

*Plaintiff-Appellee,*

and

PEOPLE OF THE STATE OF MICHIGAN,

*Intervening Plaintiff-Appellee,*

No. 77-2246

*vs.*

CITY OF MILWAUKEE, THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE, and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendant-Appellants.*

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Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.  
No. 72-C-1253—John F. Grady, *Judge*.

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\* The Honorable Roy W. Harper, Senior District Judge of the Eastern and Western Districts of Missouri, is sitting by designation.



## ORDER

This order supplements our published opinion and should be read in connection with that opinion; the order is not complete in itself. Since the subjects of this order are only the evidentiary support for the district court's findings of fact and the evidence relied on by Illinois to support 5 mg/1 BOD<sub>5</sub> and suspended solids effluent limitations, they do not meet the criteria for publication stated in Circuit Rule 35.

## I.

*Sufficiency of the Evidence Supporting Findings of Fact*

## A. Discharges of Sewage Containing Pathogens

The District Court found that the defendants dump significant amounts of sewage containing pathogens into Lake Michigan. [Tr. 14214.] Milwaukee cannot seriously contend that the evidence was insufficient to support this finding.

## 1. Discharges of Raw Sewage

In its Wisconsin Pollution Discharge Elimination System permit applications for the Jones Island Sewage Disposal Plant (Jones Island plant) and the South Shore Waste Water Treatment Plant (South Shore plant), both dated November 7, 1973, the City commission listed 18 bypass points and 31 overflow points on the Metropolitan (or Main) Interceptor System from which untreated sewage would flow directly or indirectly into Lake Michigan and rivers that flow into the lake. [Plaintiff's Exhibits (P. Ex.) 62 and 63.] The discharge permits issued for the plants require the commission to submit quarterly reports showing the discharges from selected overflow points. [P. Ex. 62 (Jones Island plant: Permit No. WI-0024767, Part II. D.6, d.); P. Ex. 63 (South Part II. D.6, d.); P. Ex. 63 (South Shore plant: Permit No. WI-0024775, Part II. E.7, c.).] The commission's report for the first quarter of 1976

indicates that in March the discharges from just 11 overflow points was 646.46 million gallons of untreated sewage. [P. Ex. 56; see P. Ex. 55 (2d quarter 1976 discharge report).] At trial, Donald Wieland, Director of Engineering for the Commission, testified that "diluted," but untreated, sewage flowed from the overflow points into Lake Michigan and Milwaukee rivers.

The City of Milwaukee's local sewer system<sup>1</sup> consists of two parts: (1) a so-called "separate sewer system," which carries only sewage to the Metropolitan Interceptor System, and (2) a "combined sewer system," which carries storm water and sewage to the Metropolitan Interceptor System. [Tr. 384; 386-387; 390-391; 426-428.] The separate sewer system has 78 overflow points (called "crossovers") at which the raw sewage flows into the city's storm sewers and then into either Lake Michigan or rivers that flow into the lake. [Tr. 428; 437-438; 448-449.] An additional 112 overflow points are built into the combined sewer system (called combined sewer overflows of "CSO overflows") at points where the combined sewer system connects with the Metropolitan Interceptor System. [Tr. 153-157; 386-387.] If the flow from the combined sewer is greater than the Metropolitan System can accommodate at the overflow point, the storm water and raw sewage are discharged into rivers that flow into Lake Michigan. [Tr. 153-155; 386-387.]

Most of the overflow points are either pumping stations or what are called "gravity overflows." [Tr. 134-135; 398; 442-444; 448-451.] "These pumping stations are installations of pumps that are activated by electrodes so that when the water level in a sewer system gets to a certain point . . . the pumps will automatically start operating and discharge the flow into a storm sewer [which empties into a river that flows into the lake] or directly

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<sup>1</sup> Although the City apparently received a discharge permit covering these sewers, the only evidence of that permit we find in the record is a modification. [D. Ex. 1110; see also Tr. 156.]

to a water course [that flows into the lake]." [Tr. 134.] At the gravity overflows, "[w]hen the sewage reaches a certain level in the . . . sewer system, it reaches a bypass pipe, and runs off into, again, either a storm sewer or the surface waters." [Tr. 134-135; see 230-232.] Because these overflow points are triggered by the level of sewage, a blockage in the sewers that causes the sewage level to rise will activate the pumps or cause the sewage to flow through the pipes that lead into the water or storm sewers, even if the sewer capacity would otherwise be adequate. In some places on the Metropolitan Interceptor System, pipes of large diameter are connected to pipes of a smaller diameter, which causes an overflow whenever the larger pipe carries an amount exceeding the capacity of the smaller pipe. [Tr. 139-140; 333-334.] Ground water and water from the storm sewers sometimes "infiltrates" or flows into the sanitary sewers, increasing the liquid flow [Tr. 148, 152], and therefore during wet weather overflows are especially likely.

In addition, the City of Milwaukee and its Sewerage Commission operate two "flushing tunnels" that clean the Milwaukee and Kinnickinnic Rivers by pumping water from Lake Michigan to upstream points in the two rivers and letting the water flow back into the lake. The purpose and effect of this flushing are to increase the flow of the two rivers and thereby wash any sewage deposited in the rivers down into Lake Michigan. [Tr. 379-383; [P. Ex. 162 (Kinnickinnic River).]

## 2. Discharges of Inadequately Treated Sewage

The district court also found that because sewage is often inadequately treated at both the Jones Island plant and the South Shore plant, the effluent from those plants also sometimes contains pathogens.<sup>2</sup> [Tr. 14214.] Effluent from the Jones Island plant is discharged into the Mil-

<sup>2</sup> The evidence supporting the court's finding that sewage contains disease causing viruses and bacteria is discussed below.

waukee Harbor, and flows from there into Lake Michigan. Effluent from the South Shore plant is discharged directly into the lake.

In evaluating the performance of the two plants, the district court relied on two indicators: (1) five day biochemical oxygen demand of the effluent ( $BOD_5$ ), and (2) suspended solids remaining in the effluent. [Tr. 14214-14215.]

$BOD_5$  and suspended solids are generally recognized to be significant factors for evaluating the degree of pollution in water. See, e.g., Sawyer, "Activated Sludge Modifications", 32 *Jl. W.P.C. Fed.* 232, 235-241 (1960) [Defendant's Exhibit (D. Ex.) 1208]. Every applicant for an NPDES permit under the Act must submit data showing the  $BOD_5$  and the suspended solids content of the applicant's discharges. [E.g., P. Ex. 62 (EPA, National Pollutant Discharge Elimination System: Application for Permit to Discharge Wastewater, Standard Form A—Municipal, question 14).]

$BOD_5$  and suspended solids are particularly significant indicators of plant performance when the issue is whether the effluent contains significant numbers of viruses or bacteria.  $BOD_5$  is an indirect measure of the biodegradable organics in the effluent. See *Standard Methods for the Examination of Water and Wastewater*, 513, 544 (14th ed. 1975). Chlorine, contained in hypochlorous acid, is the only disinfectant used at either the Jones Island plant or the South Shore plant. [P. Ex. 62, 63.] Ammonia or nitrogen in organic material will react with chlorine to form compounds that are either ineffective, or less effective than hypochlorous acid as viricides and bactericides. [Tr. 12064-12067, 3083-3084, 3086, 2204-2205.] See Sproul, "Removal of Viruses by Treatment Processes," in Berg, et al. (ed.), *Viruses in Water* 167, 173-175 (1976) [P. Ex. 140]. A relatively high  $BOD_5$  implies the presence of a significant amount of organic material, which will render chlorine either ineffective or less effective as a viricide and bactericide. Suspended solids, either organic or in-

organic, may contain significant numbers of viruses and bacteria. [Tr. 12067-12071, 12,378, 12,398, 3083-3084, 2205.] Even chlorine not rendered less effective by the presence of organic material cannot "penetrate very far" into suspended solids to "kill embedded virus." [Tr. 12067-12068; *see id.* 12,398.] Thus, a large amount of BOD<sub>5</sub> and suspended solids in the effluent indicates that any chlorine added to the sewage entering the treatment plant will be ineffective or less effective, thereby increasing the likelihood that disease causing viruses or bacteria in the influent remain in the effluent. [See Tr. 12398, 12401-12402, 3083-3085.]

Under the discharge permit issued by the Wisconsin Department of Natural Resources for the Jones Island and South Shore plants, the average daily BOD<sub>5</sub> and suspended solids content of the effluent may not exceed 30 milligrams per liter (mg/l) in any 30-day period. [P. Ex. 62 (Permit No. WI-0024767, Part II, "Daily Effluent Limitations"); P. Ex. 63] EPA regulations adopted pursuant to the Act established the same maximum levels for BOD<sub>5</sub> and suspended solids. 40 C.F.R. § 133.102(a), (b).

There are two respects in which the operation of the plants was shown to have resulted in the discharge of inadequately treated sewage into the lake. First, the permits' 30-day average limitations of 30 mg/l have sometimes been violated by the plants.<sup>3</sup> Second, whether or not the 30-day average limitations were met, discharges

<sup>3</sup> The Jones Island plant failed to meet the suspended solids limitation in each of the first three months of 1974. In 1975 that plant failed to meet the BOD<sub>5</sub> limitation in five months and the suspended solids limitation in eight months. In 1976 the plant met the BOD<sub>5</sub> limitation in 12 months but the suspended solids limitation in only six months. [P. Ex. 123, 125.]

Similar violations of the permit limitations for the South Shore plant appear in the records for 1975 (BOD<sub>5</sub> limitations met in only five months; suspended solids once) and 1976 (BOD<sub>5</sub> limitations met in seven of 11 months recorded but suspended solids in only two of those months). [P. Ex. 92, 93, 94.]



on individual days were greatly in excess of the permissible monthly average of 30 mg/1 per day.<sup>4</sup>

An expert called by plaintiffs who had studied the virus content of effluents from several sewage treatment plants in Florida [Tr. 12291-12293], Flora Wellings, Director of the Epidemiology Research Center in Tampa, Florida, testified that if the suspended solids content of the effluent was 199 mg/1, a count frequently exceeded on a daily basis by both plants, "You are still going to have a lot of virus coming through. . . ." and chlorination would not be effective. [Tr. at 12397.] Dr. Wellings characterized 15-30 mg/1 of suspended solids as "very low." [Tr. 13349-13350.] But she also pointed out that even at 30 mg/1

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<sup>4</sup> In 1974, while meeting the 30-day average for BOD<sub>5</sub> in all periods, the Jones Island plant ran as high as 98 mg/1 on one day. The high for an individual day's suspended solids count that year was 329 mg/1. [P. Ex. 125.] In 1976 the plant recorded a BOD<sub>5</sub> count as high as 170 mg/1 and a suspended solids count as high as 392 mg/1 for individual days. [P. Ex. 123, 125.] In the first four months of 1977, Jones Island recorded a BOD<sub>5</sub> count as high as 100 mg/1 and suspended solids counts as high as 388 and 237 mg/1. [D. Ex. 1302, 1303.]

The South Shore plant experienced similar problems. In 1975, its highest BOD<sub>5</sub> count for an individual day was 372 mg/1 and its highest suspended solids count 1,115 mg/1. [P. Ex. 92.] In 1976 on individual days the plant's BOD<sub>5</sub> count exceeded 300 mg/1 and its suspended solids count reached 340 mg/1. [P. Ex. 93, 94.]

In comments to a monthly report during a four month period in which the Jones Island plant never met the suspended solids limitation, the plant managers said,

The average effluent suspended solids concentration in excess of 30 mg/1 limitation are due to the continued inability to remove solids as they are generated. Ideally, the mixed liquor suspended solids should be in the range of 2000 mg/1 to 3000 mg/1 with present plant loadings. During the month of February, the mixed liquor suspended solids averaged 4300 mg/1 with a maximum day's average of 4800 mg/1.

[D. Ex. 1302, Comments for the February 1977: NPDES Permit No. WI-0024767, at 1; *see also* comments for March and April, 1977, in D. Ex. 1302.]

there would be a "lot of organics," which would either combine with the chlorine rendering it a less effective viricide or protect embedded viruses from any chlorine at all. [Tr. 12398.] In light of the operating reports from Jones Island and South Shore reviewed above, it is apparent that if Milwaukee's sewage contains pathogens, some of them are likely to survive the treatment at these plants and be discharged into Lake Michigan, as the court found.

### 3. Presence of Pathogens

The evidence established that pathogens are found in the sewage discharges of every urban center, although the record contains no evidence on the subject with respect to Milwaukee in particular.

Joseph Melnick, Professor of Virology and Epidemiology at the Baylor College of Medicine, testified that "every city the size of Milwaukee will have carriers of enteroviruses in the city who will be excreting viruses into the sewage." [Tr. 2206; see *id.* 2174, 2175.] Edwin Geldreich, Director of EPA's Microbiological Treatment Branch in Cincinnati, Ohio [Tr. 3048], testified to the same effect with respect to both viruses and bacteria. [Tr. 3101.] Experts studying enteroviruses in waste water estimate that untreated sewage will contain an average of 7000 infectious virus particles, or plaque forming units, per liter. [Tr. 2184-2185.] See Sproul, *supra* at 176 [P. Ex. 140]. Defendant's expert, Dean Cliver, Professor, Food Research Institute and Department of Bacteriology, University of Wisconsin, acknowledged on cross-examination that one gram of feces from an infected person "could contain literally millions of enteric viruses" [Tr. at 10278], *i.e.*, viruses that inhabit the gastroenteric tract of a human being. Many enteric viruses cause diseases in humans, including polio, pleurodynia, myocarditis, meningitis, and encephalitis. [Tr. 2163-2170; see *id.* 2188.] Although plaintiffs did not conduct tests to demonstrate that on a particular day Milwaukee's sewage contained disease-causing viruses, there was evidence that known tests are difficult

and ineffective for determining the presence of some such viruses. The omission is not fatal, for the evidence presented adequately supports the court's inference that Milwaukee's sewage contains disease-causing viruses and bacteria.

Although it is possible to test water for the presence of specific pathogenic microorganisms, [Tr. 3099;] *Standard Methods for the Examination of Water and Wastewater*, 954-966 (14th ed. 1975), there are practical difficulties in conducting such tests on a large scale. Therefore, those studying water pollution have generally focused on various "indicator organisms" rather than on the pathogens themselves. See *Standard Methods*, *supra*, 875, 954-955. [Tr. 3056-3064, 3099-3100.] Fecal coliform is one commonly used "indicator organism." [Tr. 3097-3100.] As the number of fecal coliform present in water increases, so too does the probability that the water will contain pathogenic bacteria. [Tr. 3102-3103.] Geldreich testified that although the relationship between the number of fecal coliform present in a water sample and the number of salmonella, one of the most common bacterial pathogens, has not been established, if in 100 samples there are 1000 fecal coliforms/100 milliliters (ml), then in about 95 of those same samples salmonella will also be found. [See Tr. 3097-3098, 3102.] Geldreich cautioned, however, that negative results cannot be relied on to assure the absence of either pathogenic viruses or pathogenic bacteria. [Tr. 3101; see *id.* 2201; 12083-84.]

The fecal coliform counts in the sewage discharged from the overflow points on defendants' sewage collection system is sometimes as high as 23,000,000 per 100 ml. [P. Ex. 55 (Overflow #036 Menomonee and North, May 16, 1976; *id.* June 14, 1976); see Tr. 3117-3118.] While warm-blooded animals other than man contribute to the fecal coliform content of Milwaukee's raw sewage discharges [Tr. 3114-3115], their contribution is likely to be relatively minor. It is highly probable that Milwaukee's sewage contains significant numbers of pathogenic viruses and bacteria.

Furthermore, the operating date for both the Jones Island plant and the South Shore plant indicate that the fecal coliform count in the effluent often exceeds 1000/100 ml. In March 1977, the effluent fecal coliform counts at Jones Island exceeded 1,000/100 ml on six of the 14 days measured, with a high of 17,000/100 ml. [D. Ex. 1303, see also P. Ex. 123 (Operating date for 1975).]

For the same reasons pathogenic viruses are likely to survive the treatment at these two plants, pathogenic bacteria are likely to survive. [See Tr. 3082-3085.] The operating data for the two plants showing high fecal coliform counts in the effluent confirm this conclusion since effective chlorination presumably would also reduce fecal coliform.

#### B. Transport of Sewage Discharged at Milwaukee to Illinois Waters

The district court found that "bacteria and viruses numbering literally in the millions are transported live and intact from Milwaukee to Illinois waters." [Tr. 14217.] This finding is not clearly erroneous.

Geldreich testified that at temperatures between 5 and 20 degrees centigrade (Celsius), 41 and 68 degrees Fahrenheit, 90% of the total number of bacteria discharged on a given day will die within 2 to 4 days. [Tr. 3092.] There are two factors, however, that may either extend the time during which bacteria discharged on a particular day will affect the receiving body of water or increase the significance of the discharge on a given day: "persistence" and "regrowth." If there are sufficient nutrients "and a set of conditions" in the receiving body of water, then bacteria may "persist" at the original density for a period of 2 to 4 days before beginning to "die-off." [Tr. 3092-3095.] Thus, bacteria may live for a period of 4 to 8 days. [Tr. 3095-3096.] Geldreich testified that "persistence" is likely to occur in improperly treated or untreated sewage. [Tr. 3094-3095.] As the term "regrowth" suggests, bacteria may reproduce after being discharged into a body of

water, provided of course that there are sufficient nutrients available. [Tr. 3093-3094.] Geldreich testified that such "regrowth" may result in the production of ten times the original number of bacteria. [Id.]

As to the die-off rate for enteric viruses, Melnick testified that at temperatures of 70 degrees Fahrenheit, viruses will survive for approximately two weeks, but at temperatures of 40-50 degrees Fahrenheit, they will survive for "months." [Tr. 2199-2200.] In colder water, viruses may live indefinitely. [Id.] If currents along the shore of Lake Michigan from Milwaukee to Illinois travel at speeds sufficient to reach Illinois in less than 4 to 8 days, then bacteria or viruses discharged at Milwaukee will be carried "live and intact to Illinois waters."

The distance from the center of Milwaukee Harbor, where the Jones Island plant is located, to the Illinois border is about 37 statute miles, about 60 kilometers (km) [Tr. 2379, 2010]; from the South Shore plant the distance is only about 25 statute miles, about 40 km [See Tr. 8944-8945]. Captain James Verber, an oceanographer specializing in water transport and water movement, testified that data collected under his supervision between 1962 and 1964 indicate that currents between Milwaukee and Illinois will travel toward the south at speeds sufficient to carry suspended pollutants 40 miles about 12 times each year. [Tr. 2392.] More specific was Verber's testimony that during the period he studied there were six occasions on which the current flowed south for 7.5 days at a rate of about 10 centimeters per second (cm/sec), and therefore covered a distance of about 50 miles. [Tr. 2379-2381.] There were other occasions on which the current traveled about 40 miles in 2.5-4.9 days. [Id.] On one occasion the current traveled at a rate of 40-51 cm/sec, covering the distance in about 1.75 days. [Id.] Verber testified that the data presented in Sato & Mortimer, "Lake Currents and Temperatures Near the Western Shore of Lake Michigan" [P. Ex. 38], indicate that the frequency of transport from Milwaukee to Illinois might be greater than 12 in some years. [Tr. 2392.] Verber pointed out that the data showed one occasion when the currents from Milwaukee



to Illinois persisted for 19 days and during that period at speeds sufficient to cover the 40 miles in less than 4 days. [Tr. 2382.]

Gabriel Csanady, an oceanographer for the Woods Hole Oceanographic Institute, also estimated that currents carrying pollutants would flow from Milwaukee to Illinois for sufficiently long periods of time and at sufficient speeds to cover the 37 miles about 12 times a year. [Tr. 2058-2060.] Csanady testified that currents persisted in one direction on an average of about 4 days, sometimes as long as 7 days and frequently for 1 or 2 days. [Tr. 2011, 2032, 2034.] See Csanady, "Diffusion and Dispersion", Part 2 in 2 *Environmental Status of the Lake Michigan Region*, 103, 115-116 (1975) [P. Ex. 201]. Csanady also testified that wind driven current speeds of 30 cm/sec or 16 miles per day were "typical" in Lake Michigan, but speeds of 50 cm/sec or 27 miles per day also have been recorded. [Tr. 1950-1952, 2009.] See Diffusion and Dispersion, *supra*, at 116 [P. Ex. 20].

Even defendants' experts, Donald Pritchard and Harry Carter, testified that currents between Milwaukee and Illinois flow toward the south for sufficient periods at rates sufficient to carry water from Milwaukee across the Illinois border on an average of four times per year. [Tr. 7168 (Pritchard); 8666-8671 (Carter); see D. Ex. 905 (Table 1); D. Ex. 1163 (Tables 2 and 4).] A table prepared by Carter and headed "Southerly Flows Sufficiently Long and/or Strong to Transport Effluent from Milwaukee to Illinois" [D. Ex. 905, Table 1], shows that in the period studied there were four occasions on which effluent released at Jones Island would have traveled across the Illinois border; the table shows that on these four occasions the effluent would have crossed into Illinois waters after about 4 days, 6 days, 5 days, and 2 days. [D. Ex. 905.] There were at least seven occasions on which effluent released at South Shore would have traveled the shorter distance into Illinois waters. [D. Ex. 1163, Table 4.]

If, as the experts testified, bacteria discharged into Lake Michigan will survive for a period of four to eight days

and viruses will survive for a minimum of two weeks and longer in periods of cool temperatures, then currents sufficient to travel the distance between Milwaukee to Illinois in less than four days will carry bacteria and viruses into Illinois waters. Defendants contend, however, that there are four factors that are not accounted for in the die-off rates for bacteria and viruses given by plaintiff's experts: (1) sedimentation, (2) biological inactivation, (3) predation, and (4) ultraviolet radiation. These factors assertedly reduce the number of bacteria or viruses that would survive the trip from Milwaukee to Illinois.

Defendants contend that sedimentation operates to reduce the number of bacteria and viruses that travel to Illinois at several points along the way. First, the Jones Island effluent is discharged into the Milwaukee Harbor, which allegedly serves as a settling basin. [Tr. 7290-7292, 7304.] The Milwaukee and Menomonee Rivers also flow into the Milwaukee Harbor; therefore, discharges into these rivers from the overflow points on defendants' sewage system are also subject to whatever settling occurs in the rivers or the harbor. [Tr. 5174-5176.] Many of the overflow points, however, discharge into storm sewers or rivers that lead directly to the lake. Some settling may occur in sewers or rivers, but the sewage from South Shore, which is discharged directly into the lake, is, of course, not subject to these settling effects. As to those discharges that are subject to sedimentation in the harbor, and the rivers leading to the harbor, two points seem dispositive. First, plaintiff's introduced evidence [P. Exs. 147 and 148] showing fecal coliform counts at the harbor entrance, where the water flows into Lake Michigan, as high as 32,000 fecal coliform per 100 ml and 37,000 fecal coliform per 100 ml. These counts were taken using the membrane filter test, which may understate the fecal coliform count that would result from using the more sensitive multiple tube test ("most probable number" test) by factors of 10 or 100. [Tr. 3070-3073.]

Second, viruses and bacteria settle out if the particles in which they are embedded or to which they are adsorbed

settle. [Tr. 2260, 10244-10245.] Pritchard stated generally that the "processes by which any living organism that drifts with the water . . . can disappear" include sedimentation, and that such living organisms are "usually . . . attached to other particles which have a density greater than water." [Tr. 7014-7015.] Nevertheless, on cross-examination, William Katz, Director of Planning and Development for the Milwaukee Metropolitan Sewerage District, testified that the specific gravity of fecal material is close to that of water, and therefore would be "one of the last things" to settle out. [Tr. 11400.] The trial court could properly have relied on Katz's testimony rather than Pritchard's, and found sedimentation of viruses and bacteria to be minimal in the harbor, rivers, or sewers.

Defendants also contend that along the path between Milwaukee and Illinois particles settle out taking their adsorbed viruses and bacteria with them. But, as observed above, if the viruses and bacteria are embedded in or adsorbed to particles with densities less than that of water, sedimentation will be minimal. Since sedimentation in either the harbor or the lake will not kill or deactivate either viruses or bacteria, if they are resuspended by turbulence in the water or rapid currents in rivers or the lake, they may still be carried "live and intact" to Illinois water. [Tr. 10322-10323, 8861-8863.] Although the four to eight day life span of discharged bacteria makes resuspension and transport less significant as to them, viruses may live for months or indefinitely in cold water. Therefore, sedimentation of viruses may be of little, or no, practical significance.<sup>5</sup>

Defendants' argument that "biological inactivation" is not included in the die-off rates testified to by plaintiff's witnesses seems to be erroneous. In the first place, the

<sup>5</sup> Any viruses or bacteria embedded in or adsorbed to organic material that does settle to the bottom may be eaten by macrobenthic organisms. See discussion of "predation", *infra*.

coliform die-off rates presented in Canale, et al., "Water Quality Models for Total Coliform," 45 *Jl. W.P.C. Fed.* 325, 330-332 (1973), on which plaintiffs' expert Csanady relied [Tr. 2050], and which are cited in evidence presented by defendants [D. Ex. 85 at 73-74], are based on studies in which water from Lake Michigan was used. Any bacteria or algae present in Lake Michigan were also present in the samples; any "biological inactivation" that would take place in Lake Michigan would also occur in the samples. [See Tr. 2300-2301.] Moreover, it is unlikely that such biological inactivation" as may occur [Tr. 10226-10229] is significant. [Tr. 2297-2299.] Melnick testified that although "biological inactivation" may occur, it is much less significant than water temperature as a factor affecting the die-off rate. [Tr. 2297-2299.] Cliver who participated in the study described in Hermann, et al., "Persistence of Enteroviruses in Lake Water," *Applied Microbiology* 895 (1974) [D. Ex. 38], testified that viruses injected into sterilized water from Lake Wingra in Madison, Wisconsin, lived longer than similar viruses injected into unsterilized lake water in a dialysis bag that was placed back into the lake. [Tr. 10227-10229.] Relying on that evidence and data collected in an earlier study, Cliver and his colleagues suggested that proteolytic enzymes produced by bacteria and other organisms in Lake Wingra accelerate deactivation of some types of viruses. See "Persistence of Enteroviruses," *supra*, at 895 [D. Ex. 38]. Assuming that bacteria or other organisms that produce proteolytic enzymes do exist in Lake Michigan, that fact does not substantially undermine the conclusion that the discharges at Milwaukee will affect Illinois. For as Cliver testified, notwithstanding any such "biological inactivation," deactivation of any viruses discharged into Lake Michigan in the winter could take months. [Tr. 10314, 10315.]<sup>6</sup>

<sup>6</sup> The bacteria ordinarily found in sewage do not produce the proteolytic enzymes that accelerate deactivation of viruses. [Tr. 10326-10329.]

The third factor that defendants contend is not included in the die-off rates, but which affects the number of bacteria or viruses that would survive the trip from Milwaukee, is predation or grazing. Since bacteria or viruses are frequently adsorbed to organic material, if the organic material is ingested by organisms living in the lake, then the bacteria or viruses are also consumed. There is no doubt that organic material in the lake is consumed by the various things living in the lake. [E.g. Tr. 10086.] Defendants principally rely upon the testimony of Robert Otto, an aquatic biologist at Johns Hopkins University, and a report [D. Ex. 1321] prepared by him. Otto testified that macrobenthic organisms, which live on or in the bottom of the lake, "eat just about anything they can get their hands on that is on the bottom . . . ." [Tr. 10082; see Tr. 10084.] Otto further explained that:

In some cases [the macrobenthic organisms] don't have the grinding capabilities to break down some kinds of organic material, but bacteria, of course, often have the ability to use these materials. If you ingest a particle which has a nice coat of bacteria, which are a live food source, these organisms can then digest the bacteria but not the particle, so they just clean the particle off and send it back out to be recolonized by the bacteria.

[Tr. 10084-10085.] Otto does not refer to viruses but we assume they are subject to the same predation as bacteria. That macrobenthic organisms digest the bacteria on the outside of a particle is significant, but not dispositive, since we are also concerned about bacteria or viruses embedded in the solids. Furthermore, bacteria adsorbed to the outside of a particle will have been exposed to some chlorine even if it has been rendered less effective by combination with organic material in the effluent. Finally, to the extent that there are macrobenthic organisms that do have the "grinding capabilities or the digestive capabilities" to use the organic material, they only affect material that has settled to the bottom. As noted above, since fecal material has a specific gravity near that of water, much of it will remain suspended in the water column.



Otto also testified that there are three forms of zooplankton that swim in the water column, and that,

Some forms eat phytoplankton [herbivorous]. Some forms are predatory in the sense that they eat other zooplankton [carnivorous]. Some types are omnivorous in that they will eat other zooplankton if they catch them. They will eat phytoplankton if they happen to run across them. They will eat particulate matter if it happens to come along.

[Tr. at 10086.] Only the omnivorous form of zooplankton eat particulate matter. Defendants assert that the report prepared by Otto [D. Ex. 1321] "indicates the abundance of the many predator grazing organisms in the lake." [Joint Memorandum at 40.] That document relates solely to macrobenthic organisms. There is no evidence that omnivorous zooplankton are present in Lake Michigan in any significant numbers. In fact Otto's testimony suggests exactly the opposite, for, in summarizing his testimony concerning the interrelationships of the organisms that live in the lake, he said, "In general zooplankton eat phytoplankton and macrobenthics eat just about anything they can get their hands on that is on the bottom, and fish eat zooplankton and macrobenthics."<sup>7</sup> [Tr. 10081-10082.] Thus, it appears that although there are some omnivorous zooplankton, most of them are herbivorous. Moreover, zooplankton suspended in the water, would presumably be picked up in the water sample, in which case a die-off rate based on the observed die-off rate in a lake water sample would include some predation. In any event, based on the evidence presented, it appears that the most significant predation occurs with respect to viruses and bacteria that have settled to the bottom.

The fourth factor, ultraviolet radiation, is probably not accounted for in die-off rates based on laboratory obser-

<sup>7</sup> Presumably, some fish might also eat organic material containing pathogens. Defendants do not, however, refer us to any evidence in the record on this point.

vations. Although defendants concede that ultraviolet radiation is "not very significant," they argue that it should have been considered. Their witness Cliver testified that it would affect only a "very superficial layer of water" and would have no "significant effect on viruses within the water column." [Tr. 10311.] Plaintiffs' witness Melnick testified that ultraviolet radiation would deactivate viruses only in the top 1/10 of an inch of water and then only if they remained there for several minutes. [Tr. 2292.] We are not referred to any evidence that the effect on bacteria would be substantially different.

The district court's finding that pathogens discharged at Milwaukee are sometimes carried "live and intact" to Illinois waters is not clearly erroneous, even considering each of the assertedly independent factors urged by defendants.

### C. Dilution and Distance from Shore

Even if pathogens live long enough to be transported from Milwaukee to Illinois and there are no other factors that would significantly reduce their numbers, dilution of the lake would reduce their concentration in a particular parcel of water. The district court found that although there was some dilution, it did not reduce the concentration of pathogens to significance. [Tr. 14217.] That conclusion is amply supported by the evidence presented at trial. Geldreich, it will be recalled, testified that a fecal coliform count of 1,000/100 ml indicates a high probability that pathogens would be present. *See* discussion of fecal coliform, *supra*. Defendant's witness Carter, using data found in the record,<sup>8</sup> including an initial fecal coliform con-

<sup>8</sup> He used a diffusion velocity  $w = .33$  [which was the average diffusion velocity found in the Pritchard-Carpenter study (P. Ex. 227) as estimated in D. Ex. 1164], a flow rate of 13,000 cubic feet per second [as indicated in D. Ex. 1164], a current speed of 1.19 feet per second [as indicated in D. Ex. 1164], a distance of  $1.97 \times 10^5$  feet [as indicated in D. Ex. 1164], and an initial fecal coliform count of 35,000 per 100 ml [based on data in P. Ex. 148].

centration of 35,000/100 ml, calculated that the fecal coliform concentration of water at the Illinois border, not including any die-off, would be 4,014 fecal coliform per 100 ml. [Tr. 8924-8925.]<sup>9</sup> Csanady whose testimony on this point the court found credible [see Tr. 14216-14217], testified that if the current speed was 30 cm/sec., which Csanady testified was typical in Lake Michigan, dilution would have reduced the fecal coliform concentration in water beginning at Milwaukee by only 15% when it reached the Illinois boundary. [Tr. 2013-2014, 2054.] See *Diffusion and Dispersion*, *supra*, at 116-117 [P. Ex. 20]. Applying the *Canale* die-off rate, Csanady estimated that a fecal coliform concentration of 10,000 per 100 ml<sup>10</sup> would be reduced to 3,000 per 100 ml at the Illinois boundary, considering dilution and die-off. [Tr. 2053, 2054.] Defendants do not directly contest this point; rather they argue that in addition to dilution and die-off, the four "independent" factors already discussed should have been considered.

Whatever effect dilution may have, any viruses or bacteria that are in the water are reconcentrated to some extent on the water intake filters of drinking water treatment plants. [Tr. 13268-13269.] Generally reconcentration is not of great significance, but if there is a breakdown in the filtering system this high concentration of viruses will flow into the system and if treatment is not adequate, into the drinking water supply. [*Id.*; see also D. Ex. 34, p. 4.]

Defendants contend that if bacteria and virus live long enough to be transported to Illinois waters and are not

<sup>9</sup> Using the .58 die-off coefficient that defendants argued was proper [D. Ex. 1164], Carter calculated that the concentration at the Illinois line would have been 1,321 per 100 ml. [Tr. 8932-8933], well over the 1,000/100 ml indicator that Geldreich's testimony established.

<sup>10</sup> As stated in the text, *supra*, the fecal coliform counts for the raw sewage discharged from the overflow points on defendants' sewer system is sometimes much higher than 10,000/100 ml.

reduced to insignificance by dilution or other factors, they nevertheless remain too far from the shore to have any effect on Illinois water supplies or to be of any consequence to Illinois swimmers. Although the district court made no express finding on the distance from shore at which pathogens arriving in Illinois from Milwaukee will be found, the fact that the pathogens will be close enough to affect water supplies and swimmers is implicit in the court's finding that "[o]nce these pathogens arrive in Illinois waters, they can infect and cause disease in residents of Illinois . . . in two ways: by ingestion of these waters at bathing beaches by swimmers and by ingestion of drinking water containing these pathogens." [Tr. 14221.] There is evidence sufficient to support the finding that pathogens arriving in Illinois waters from Milwaukee will be close enough to shore to affect Illinois residents.

Defendants contend that Csanady's testimony clearly shows that "pollutants, either conservative or nonconservative, which may have entered Lake Michigan at Milwaukee never get close enough to shore in Illinois to cause any hazard." [Joint Memorandum at 46.] Even the passage relied upon by defendants does not support the proposition. Csanady testified that although the center of dye plume, used to simulate pollution movement, might be located several kilometers from shore,

The concentration simply decreases from the center as you go shoreward . . . . The maximum occurs a certain distance from shore. But it doesn't decrease to zero.

[Tr. 2584.] In other words, lateral diffusion of the dye plume would result in some of the dye reaching the shore even though higher concentrations would be found further offshore. Defendants' witness Pritchard also testified that this would occur. [Tr. 6564.] Furthermore, in a passage not cited by the defendants, Csanady testified that a dye plume would move back and forth in an area extending from the shore to about 6 miles out in the lake. [Tr. 2586.] In response to the question of whether peak

concentrations would ever move on shore, Csanady answered, "Yes, and there would be situations where the slug [or dye plume] meanders on shore and hits areas closer to shore." [Tr. 2025.] It seems fairly obvious that whether or not a dye plume or pollution will hit the shoreline depends in large part on wind direction. [See P. Ex. 222, 223, 224 (dye studies conducted at Milwaukee beaches in 1963).] Indeed, based on his study of pollution data from the Evanston-North Shore beaches and the associated wind directions, Geldreich testified: "It is quite obvious that there are occasions when the wind, when it is blowing from the northeast, is pushing pollution on those beaches." [Tr. 3111.]

Defendants also argue that upwelling and downwelling of the lake water operate to carry any pollution in the near shore areas out into the center of the lake in the manner described in the margin.<sup>11</sup> There are several fac-

<sup>11</sup> In the winter, when throughout the depth of the lake the temperature is fairly uniform, the effect of upwelling and downwelling is less significant than in summer, when the temperature decreases with depth. In summer the upper layer of the lake, the epilimnion, and the bottom layer, the hypolimnion, are separated by an intermediate layer, the thermocline. Since heat from the sun warms the epilimnion and to a lesser degree the thermocline, but has little effect on the hypolimnion, the temperature at the three levels varies. [Tr. 2071-2072.] Water is heaviest at 4 degrees Celsius (or 39 degrees Fahrenheit); at temperatures either above or below 4 degrees Celsius, water is lighter. The temperatures in the hypolimnion stay close to 4 degrees Celsius, and therefore the water generally remains at the bottom. [Tr. 2072.] Water in the epilimnion generally remains on the top since it is warmer than 4 degrees Celsius and therefore lighter than the water at the bottom. As might be expected, in the intermediate layer or thermocline, the temperature increases rapidly from bottom to top. According to Csanady, "The physical effect of that rapid temperature change is to suppress the movement of parcels of fluid." [Tr. 2072.] Consequently, the thermocline "becomes an effective floor for the mixing processes in the top of the lake . . . ." [*Id.*] Thus any pollution discharged in the water which does not remain suspended near the top because of its specific gravity can mix with

(Footnote continued on following page)



tors that can cause upwelling or downwelling and at any particular time there may be more than one contributing factor, but the most important appears to be wind. [E.g., Tr. 6498-6502.] If the wind blows from the west, surface waters on the western side of the lake move offshore and there is upwelling on the western shore and downwelling on the eastern shore; if the wind is from the east, then there is downwelling on the western shore and upwelling on the eastern shore. Nevertheless, the experts agree that whatever the wind direction the predominate current in the near shore area is shore parallel, either north or south. [Compare Tr. 6508, 6584 (Pritchard) with Tr. 1955-1956, 1947 (Csanady).] Indeed, the near-shore

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Footnote 11 (continued)

water all the way to the bottom. [Tr. 2022-2023.] But such pollution discharged in the summer after the thermocline has formed can only mix with the water down to the thermocline, reducing the dilution and increasing the concentration. [*Id.*]

Upwelling in the near-shore area would cause the surface waters to move toward the center of the lake. The near-shore surface water, having moved offshore, is replaced by deeper near-shore water, which is in turn replaced by deep offshore water. In winter since any pollution in the near-shore waters can mix to the bottom, the result is that polluted surface water near the shore will be replaced by deeper near-shore water, which may also be polluted to some extent and is in turn replaced by at least arguably cleaner offshore water, with the result that the pollution in the near-shore zone will be diluted.

Similarly, but perhaps more important, upwelling in the near-shore zone when the thermocline prevents mixing in the lower levels of water causes relatively clean water to replace the polluted surface waters that move offshore. The deep near-shore water is then replaced by cleaner deep offshore water. Upwelling in the summer causes the heavier water from the bottom to move to the top. When the force causing the upwelling stops, the heavier water sinks back to the bottom and is replaced by offshore warm surface water. [Tr. 6499-6501.]

For a detailed description of the upwelling/downwelling phenomenon see Mortimer, "Physical Characteristics of Lake Michigan and its Responses to Applied Forces," 2 *Environmental Status of the Lake Michigan Region* 35-43 (1975) [P. Ex. 20].

zone is sometimes defined as the area in which the predominate currents are shore parallel. [Tr. 6577; P. Ex. 38] Sato & Mortimer, *supra*, at 286 [Tr. 6577; D. Ex. 38].

Assuming that any upwelling on the western shore would clean out the near-shore waters, we cannot conclude that the pollution discharged at Milwaukee does not come close enough to shore to affect Illinois residents. At most, this evidence shows that discharges from Milwaukee would not build up over time in the near-shore waters. Moreover, as Pritchard's Ocean City, Maryland, experiments demonstrate, downwelling on the western shore will cause any pollutants in the near-shore zone to move toward the shore and sometimes all the way to the shore. [See Tr. 6565-6569.]

#### D. Danger to Illinois Residents

As noted above, the district court found that there were two ways in which pathogens discharged at Milwaukee can effect Illinois residents: "ingestion of these waters [containing pathogens] at bathing beaches by swimmers and by ingestion of drinking water containing these pathogens." [Tr. at 14221.] If there are viruses in the lake, swimmers may be infected. Melnick testified that "if they have minor cuts or abrasions on their skin, if they get water in their mouth or nose, they could pick up the virus and become infected." [Tr. at 2218.] It follows that if there are viruses in drinking water, the people drinking it may also be infected.

Two points should be noted concerning the hazards to swimmers. First, although any danger to swimmers exists only in summer when the lifespan of viruses and bacteria are shortest due to "warmer" water temperatures, the evidence discussed above shows that even at 70 degrees Fahrenheit (21 degrees Celsius) viruses will survive for about two weeks [(Tr. 2199)] and bacteria will survive for at least 2 days [(Tr. 3092.)] Except in July and August, water temperatures in Lake Michigan seldom reach 70 de-

grees F;<sup>12</sup> at the lower temperatures more frequently found in Lake Michigan both viruses and bacteria will survive for longer time periods. [Tr. 2199, 3092.] Second, because of what was referred to at trial as the "coastal jet phenomenon", lake currents in summer are likely to be much more rapid than in winter, sometimes reaching speeds as high as 50 cm per second, which would carry effluent released at Jones Island to Illinois waters in less than two days. [Tr. 2009-2010; for an explanation of the coastal jet phenomenon *see* Tr. 2097-2098.] A current of 50 cm/sec would of course carry any effluent discharged at the South Shore plant to Illinois waters in even less time.

The district court found that viruses can and do get through drinking water treatment plants "both when the plant is being operated properly and even more so should the plant experience a breakdown." [Tr. 14222-14223.]

Organic matter in raw water from the lake may be concentrated on filters in water treatment plants, and when there is a breakdown or the filter fails to function the matter comes through. [Tr. 13269.] Viruses can be washed through with particulates when the filter is cleaned by flushing or pH is changed. [Tr. 13272.]

Viruses or bacteria in Lake Michigan can only affect Illinois drinking water supplies if they remain in the water after treatment. Tap water, after passing through a drinking water treatment plant, may contain particulate matter. [D. Ex. 34, p. 4.] Wellings, although not an expert on drinking water treatment plants, testified that such particulate matter might contain viruses. [Tr. 13265.] In addition, Berg testified that "solid colloidal material" remaining in treated drinking water and referred to in two articles introduced by the defendants' [D. Exs. 3 and 34] as "turbidity" may contain viruses. [Tr. 12077, 12080-

<sup>12</sup> *See, e.g., Sato & Mortimer, supra*, [P. Ex. 38] at 64, 68, 72, 74, 78, 80, 82, 86, 88, 93, 94, 96, 100, 102, 106, 110, 114, 118, 122, 124, 126, 130, 132, 138, 142, 146, 150. [See also Tr. 10314-10315.]

12082.] The testimony of Wellings and Berg indicates that viruses embedded in particulate matter" [Tr. 13265-13266] or "solid colloidal matter" [Tr. 12080-12081] can survive the chlorination that occurs in water treatment plants. [Tr. 13265-13266 (Wellings as to particulate matter); Tr. 12080-12081 (Berg as to solid colloidal matter).] Although the evidence that a properly designed and operated water treatment plant will not provide adequate protection against pathogens in the raw water is less than compelling, it raised a debatable issue that the trial court was justified in resolving against defendants.

Moreover, the effectiveness of water treatment plants is not determined only by their optimal performance. Sometimes they do not operate at peak efficiency. Berg testified as follows:

If a [drinking water] treatment plant breaks down at some point in time for some period of time, even for a very short period of time, during that period of time when there is perhaps inadequate removal of the solid material, when there is lack of chlorination, then any impact that raw water coming in may have by way of pathogenic agents, viruses or anything else, can presumably become a problem.

Q. Doctor, are you familiar with the public health principle articulated in the fields of microbiology and virology of a double tier protector?

A. Yes. The multiple barrier

. . . .

A. (continuing) that we speak of, which means that you try to protect the raw water as much as you can so that in the event that something does happen as a treatment plant that you don't bring about an insult that can be carried through the plant and in this respect, carry through into the finished water pathogenic organisms or viruses.

[Tr. 12082-12083.] Melnick and Geldreich also testified that the possibilities of human error or mechanical breakdown make it imprudent to rely on water treatment plants to remove viruses from drinking water supplies. [Tr. 2191-2192 (Melnick); Tr. 3106-3107 (Geldreich); see Tr. 13267 (Wellings).]

The trial court's finding that viruses discharged into Lake Michigan at Milwaukee pose a hazard to Illinois drinking water supplies is therefore not clearly erroneous.

#### E. Accelerated Eutrophication

The district court found "that the defendants' sewage discharges into Lake Michigan are presently contributing in a substantial way to the accelerated eutrophication of the inshore zone of the western shore of Lake Michigan, including waters of Lake Michigan which are within the territorial boundaries of the State of Illinois." [Tr. 14242-14243.] Defendant's challenge to this finding is that the court did not quantify their contribution to accelerating eutrophication and that this was error because there are other contributors and defendants should not have been singled out. They do not question that they made the contribution, only its relative magnitude.

The significance of the court's eutrophication finding in relation to the issues to be decided is less than clear. As we explain below, the principal offending contaminant is phosphorus.<sup>13</sup> Defendant sewerage commissions acknowledge that "the trial court has merely enforced the defendants' discharge permit phosphorus requirements" (1 mg/l), but they then add, "though different and costlier timetables are imposed." [Sewerage Commissions' Brief 28.] In our examination of the effluent limitations in the

<sup>13</sup> Illinois asserts that sewage and effluent contain unspecified "other nutrients" that contribute to eutrophication. There were no findings made or relief granted with respect to these other nutrients, so we need not discuss them further.



court's order and the discharge permits, undertaken without any guidance beyond the characterization quoted, we have been unable to discern any basis for that characterization. The permits' timetables for the phosphorus limitation seem to require compliance earlier than does the phosphorus limitation in the order. Thus the latter would, as a practical matter, appear to be academic. Nevertheless, because there is at least a theoretical possibility that the permit limitation will be relaxed, and also because the raw sewage discharges not covered by the permit contain phosphorus, we shall briefly examine the evidentiary basis for the eutrophication finding.

The term "eutrophication" refers to the general increase of nutrient concentration in a body of water, which results in increasing concentrations of phytoplankton and other living organisms. [Tr. 2822-2826.] The evolution of a body of water from oligotrophic (low nutrient concentrations) through mesotrophic (moderate nutrient concentrations) to eutrophic (high nutrient concentrations) is a natural process. See, *e.g.*, Sawyer, "Basic Concepts of Eutrophication," 38 *Jl. of W. P. C. Fed.* 737 (1966) (D. Ex. 1213). Nevertheless, man's input of nutrients can drastically accelerate the process. See, *e.g.*, Sawyer, ABC's of Cultural Eutrophication and its Control: Wastewaters, Part 2," October *Water & Sewage Works* 322 (1971) [D. Ex. 1215]. Liminologists regard phosphorus as a "controlling element" in eutrophication [Tr. 2883-02884]. See, *e.g.*, Sawyer, "The Need for Nutrient Control", 40 *Jl. of W. P. C. F.* 363, 367-368 (1968) [D. Ex. 1214]; Sawyer, "ABC's of Cultural Eutrophication and its Control: Wastewaters, Part 2, *supra*, [D. Ex. 1215]. In other words, since phosphorus is necessary to support the growth of phytoplankton, limiting phosphorus inputs will impose an upper limit on the quantity of phytoplankton that a particular body of water can support. Sawyer, "ABC's", *supra*; Sawyer, "Nutrient Control", *supra* [D. Ex. 1214, 1215,]. Thus, although limiting phosphorus does reduce the nutrient concentration, the more important effect of such a limitation is that it reduces the external manifestations of eutrophication.

Phytoplankton and other organism resulting from eutrophication reduce the clarity of the water, cause objectionable smells, deplete the oxygen supply of the water, and may affect the quality of drinking water supplies. [Tr. 2826, 2924-2925.] Lake Michigan is experiencing accelerated eutrophication [Tr. 2883-2884], particularly near Milwaukee. See *An Environmental Study of the Ecological Effects of the Thermal Discharges from Point Beach, Oak Creek, and Lakeside Power Plants on Lake Michigan*, 10.0-49 to 10.0-50 (1974) [P. Ex. 2]. [Tr. 2879-2880; compare P. Ex. 144 at 20 and 72 with Tr. 2854.]

Determining what proportion of the total phosphorus discharges into Lake Michigan is contributed by Milwaukee seems hardly feasible and was in any event unnecessary. It is enough to support the limited relief granted with respect to phosphorus that Milwaukee's contribution was substantial.

## II.

### *Evidence Relied on to Support 5 mg/l Limitations*

The most specific evidence relied on by Illinois to support the 5 mg/l suspended solids effluent limitation imposed by the court is Wellings' testimony that similar solids limitations are used in St. Petersburg, Florida and that lower effluent solids content results in more effective disinfection:

A. Our aim in St. Petersburg is to reduce solids to a 5, Jackson, JTU, Jackson Turbidity [U]nits, which is less than, I think probably 5 milligrams per liter of solids.

Then that gives you the opportunity to have an effective chlorination. [Tr. 12397.]

. . . . .

THE COURT. If you have say 5 milligrams per liter of solids, does that help the chlorine remove or

kill the viruses associated with those solids more than would be the case if you have 30 milligrams per liter?

THE WITNESS. Well, the problem with 30 milligrams per liter is you are going to have a lot of organics tied up with solids that is going to use up your chlorine, and the chlorine can't even get into.

THE COURT. I see. So the fewer solids, the less chlorine is used up in other ways.

THE WITNESS. That is right, and that is the reason if you get it down low enough you will have enough active chlorine that can really get to the solids. [Tr. 12398].

. . . . .

Q. [Illinois' counsel] Doctor, whenever we are finding high solids—well, is it your opinion that even at 30 milligrams per liter of solids that we have a problem with disinfection?

A. I think you would still have a problem with disinfection.

I really don't know how I would equate Jackson Turbidity Units with milligrams, you know, because you would have to know size, shape and all that, source, because of the test itself, but I would say 5 milligrams per liter would be well in the ball park.

. . . . .

THE COURT. What do you mean by that phrase? Do you mean that would be what you would desire?

A. Well, I wouldn't want any more than that.

THE COURT. You would not want any more than that?

THE WITNESS. I would prefer much less, but I wouldn't want any more than 5.

Q. [Illinois' counsel]. So if we could perform at a maximum of 5 but consistently there would be ones and twos, would that be it?

A. Yes. [Tr. 12401-12402.]

To support the 5 mg/1 BOD<sub>5</sub> effluent limitations, as well as the solids limitation, plaintiffs rely on Geldreich's testimony that for most effective disinfection, BOD<sub>5</sub> and solids should be reduced as much as possible:

Q. [Illinois' counsel]. With respect to the question of BOD, which you have indicated interfered with the chlorination process, do you have any opinion as to how low we should get the BOD?

A. As low as possible.

Q. If you can achieve four milligrams per liter BOD through an advanced waste treatment facility, would that be desirable from the standpoint of chlorination?

A. Yes, sir.

Q. With respect to removal of solids, you indicated the solids problem being the encapsulation situation, with respect to effective disinfection through the use of chlorine, do you have any suggestion as to the level that you would want to have for solids?

A. Five milligrams per liter would be desirable.

Q. When you say five milligrams per liter, if that were achievable at an advanced waste treatment facility, would you approve of such a standard?

A. Yes, sir. [Tr. 3090-3091.]

Plaintiffs also rely on Berg's testimony that solids and organics interfere with chlorination:

Q. [Illinois' counsel]. So, if we have got fecal material or any other materials surrounding the viruses and you put chlorine on it, will that kill it?

A. The chlorine isn't going to penetrate very far. It is not going to kill embedded virus.

Q. Would it be fair to say that in order to have effective chlorination of the material that you are chlorinating, you should remove the solids?

A. That is correct.

Q. With respect to the organisms, do you also try and remove the organics?

A. Yes. You would want to do that in order to prevent or reduce the formation of the compounds that are less effective. [Tr. 12068.]

Plaintiffs assert that Berg "testified that plant effluents of 50 or 100 mg/1 BOD or suspended solids . . . would have no virus removal" [citing Tr. 12118-12120, Supplemental Memorandum of Plaintiff-Appellee State of Illinois 106]. The following passage from the transcript is cited in support of that assertion but does not appear to us to support it:

Q. [Illinois' counsel]. If you were getting [residual chlorine measurements of] . . . less than .1 by means of the orthotolidine method with respect to effluent from the standpoint of chlorination as a viricide, would you give an opinion as to the effectiveness of such chlorination as a viricide?

. . . . [Objection overruled.]

THE WITNESS. If we are talking about sewage effluent, the secondary effluent, from an activated sludge plant, that contains any substantial amount of ammonia as they usually do unless there is a special treatment to remove it, then all of that chlorine is going to be combined chlorine.

Q. That would also assume, if you would assume, the presence of numbers of solids in the 50's or hundreds and the BOD in the 50's or hundreds?

A. We have looked at some plants with levels like that.

. . . . [Objection overruled.]



A. . . . We have looked at plants where we have seen chlorine levels, combined chlorine levels of 2, 3 parts per million, and we haven't been able to differentiate the amount of virus going in from the amount of virus going out. [Tr. 12117-12119.]

Residual chlorine content is related to solids and BOD<sub>5</sub> content, but Berg does not seem to have been saying that 50 or 100 mg/liter suspended solids or BOD<sub>5</sub> would result in "no virus removal." Indeed, Berg pointed out that the effectiveness of chlorine as a viricide, whatever the solids or BOD<sub>5</sub> content of the effluent, will vary depending upon the manner in which chlorine is introduced into the effluent. [Tr. 12119-12120.]

Plaintiffs also rely on Gordon Culp's testimony, suggesting that the kind of treatment necessary to meet the effluent limitations imposed by the district court is preferable to the kind of treatment now used by the defendants:

Q. [Illinois' counsel]. When you talk about coagulation and settling combined with filtration, you get a very stable, very uniform, very low concentration of contaminants in the effluent, is that right?

A. That is right. It is very consistent. You are no longer dependent on the gravity separation, only of a very light flocculent biologic material, biologic material which can vary in its settling capabilities from day to day. Now you have very positive control with the solids.

Q. Let me just ask this. You were a trained engineer dealing with an activated sludge plant—were you very conscientious about its performance?

A. Yes.

. . . .

Q. Now, despite your trained engineering supervision of that plant, were you able to get a con-

sistently low solid and BOD out of the activated sludge plant?

A. No.

Q. Are the upsets in an activated sludge plant something that you can predict? Can you sit back and say "We are going to have a bad day tomorrow?"

A. No, you certainly cannot. There are some conditions, of course, which will occur which will allow you to predict that, but the normal operation, no.

[Tr. 13006-13007.] Finally, plaintiffs note that one of the defendants' consultant sanitary engineers recommended treatment similar to that required to meet the effluent limitations imposed by the court, that three cities have been required to meet similar effluent limitations, and that several other cities have decided to make additions to their own treatment facilities similar to those that will be required under the court's order.

The reasons supporting our finding that this evidence is insufficient to support the 5 mg/1 BOD<sub>5</sub> and suspended solids limitations are stated in our published opinion and need not be repeated here.

## APPENDIX L

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UNITED STATES COURT OF APPEALS  
For the Seventh Circuit  
Chicago, Illinois 60604

June 14, 1979

Before Hon. THOMAS E. FAIRCHILD, *Chief Judge*  
Hon. PHILIP W. TONE, *Circuit Judge*  
Hon. ROY W. HARPER, *Senior District Judge\**

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PEOPLE OF THE STATE OF ILLINOIS,

*Plaintiff-Appellee,*

and

PEOPLE OF THE STATE OF MICHIGAN,

*Intervening Plaintiff-Appellee,*

No. 77-2246

*vs.*

CITY OF MILWAUKEE, THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE, and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendant-Appellants.*

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Appeal from the United States District Court for the  
Northern District of Illinois, Eastern Division.  
No. 72-C-1253—John F. Grady, *Judge.*

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\* The Honorable Roy W. Harper, Senior District Judge of the United States District Court for the Eastern and Western Districts of Missouri, is sitting by designation.

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ORDER

On consideration of the petition for rehearing and suggestion for rehearing in banc filed in the above-entitled cause by counsel for the plaintiff-appellee, no judge in regular active service having requested a vote on the suggestion for rehearing in banc, and all members of the original panel having voted to deny a rehearing,

IT IS ORDERED that the aforesaid petition for rehearing be, and the same is hereby, DENIED.

## APPENDIX M

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

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Case No. 72 C 1253

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PEOPLE OF THE STATE OF ILLINOIS, ex rel. WILLIAM J. SCOTT,  
Attorney General of the State of Illinois, *Plaintiff,*

and

PEOPLE OF THE STATE OF MICHIGAN, *Intervening Plaintiff,*

*v.*

CITY OF MILWAUKEE, WISCONSIN; CITY OF KENOSHA,  
WISCONSIN; CITY OF RACINE, WISCONSIN; CITY OF SOUTH  
MILWAUKEE, WISCONSIN; THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE, and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,  
*Defendants.*

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### AMENDED JUDGMENT ORDER

This Court's Judgment Order dated November 15, 1977 having been affirmed in part and reversed in part by the United States Court of Appeals for the Seventh Circuit, on April 26, 1979, under that Court's docket number 77-2246, and the case having been remanded to the Court for appropriate action in conformity with the Seventh Circuit Opinion, as herein set forth,



NOW THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED that the defendants CITY OF MILWAUKEE AND THE METROPOLITAN SEWERAGE COMMISSION OF THE COUNTY OF MILWAUKEE and each of them and their agents, employees or successors in interest are hereby permanently enjoined from emitting sewage discharges, from the respective sewer pipes or structures owned or maintained by the defendants, into Lake Michigan or any of its tributary waters, except as hereinafter permitted in this order and said defendants are hereby ordered to:

(1) The respective defendants shall in their respective jurisdictions eliminate all sewage overflows emanating from sewer pipes or structures owned, operated or maintained by the defendants located outside of the area which was designed by the defendants at trial as the Combined Sewer System Area hereinafter ("CSO"). Elimination of such overflows shall be completed on or before July 1, 1986. For purposes of this order, an overflow is defined as a crossover, bypass, diversion structure, relief structure, pump station or any other device or mechanism by which human fecal waste is discharged directly or indirectly to public streams, rivers or lakes without collection and treatment according to the treatment methods and effluent limits set forth in paragraph (3) below. If, in defendants' opinion, completion by such date becomes impossible due to circumstances beyond defendants' control, then defendant(s) may apply to the Court for an extension of time for completion. Any such application, if opposed by either plaintiff, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendant shall be required to prove the basis for and for necessity for such extension which extension shall be granted or denied in the sound discretion of the Court. Defendants shall pay plaintiff(s)' entire costs of any such application including reasonable attorneys' and experts' fees, and the costs of discovery, preparation and presentation of their position.

(2) The Commission defendants shall in three stages, the first to be completed on or before December 31, 1985; the second on or before December 31, 1987; and the third on or before December 31, 1989, put into operation a collection, and conveyance system in the combined sewer system area ("CSO") which shall collect and convey all human fecal waste entering the sewers in the combined sewer system area. The first stage of such system shall have storage capacity of not less than 700 acre feet, the second not less than an additional 1290 acre feet, and at the completion of the third stage (December 31, 1989) the entire system shall have storage capacity of not less than 2605 acre feet and shall be designed and operated within such storage capacity so as to collect, convey and store the volume of flow and all human fecal waste capable of transmission by the combined sewer system. Defendants have analyzed rainfall events experienced during the period 1940 through the date hereof (which is the period for which detailed hourly rainfall data is available) and have represented to this Court that their analysis demonstrates that at a storage capacity of 2605 acre feet, there would have been no overflows from such a system. All fecal wastes and flows collected and conveyed from the combined sewer area shall be treated according to the treatment methods and to the effluent limits set forth in paragraph (3) below.

Overflows, if any, which do occur shall constitute a violation of this order unless defendants can prove as a defense to a charge of violation either:

(1) that the overflow resulted from runoff conditions which exceeded the capacity of the 2605 acre feet of storage at a pump out rate to the treatment required by this Judgment Order of 110 CFS; and that the runoff events which resulted in the overflow would have caused an overflow in excess of the design capacity of the 2605 acre feet storage system at 110 CFS under

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the identical scientific premises and calculations used by the defendants prior to the date of this order to design the size of such storage system; or in the case of overflows resulting from causes other than excess runoff events,

(2) that the overflow was wholly caused by actions or occurrences wholly outside the control of the defendants and was in no way caused or contributed to by the negligence of the defendants.

Any defense to an overflow violation shall be predicated on an evidentiary hearing preceded by an adequate opportunity for discovery by plaintiffs. Defendants shall bear the evidentiary burden of proof of establishing the defenses listed above, and if the Court finds that the defense has not been proven, shall pay plaintiff(s)' entire costs of opposing any such defense including reasonable attorneys' and experts' fees and the costs of discovery, preparation, and presentation of plaintiffs' position. In any event, any overflows which may conceivably occur shall be subjected to treatment by bar screens, followed by drum screens, followed by chlorination prior to discharge. Should defendants develop information which establishes in defendants' opinion that separation of all or part of the system is a preferred alternative, which will provide a collection and treatment level equal to or better than that required herein then defendants may apply to the Court for modification of this paragraph to provide therefor. Any such modification, if opposed by either plaintiff, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendants shall bear the evidentiary burden of proof of establishing that such modification equals or exceeds the level of protection provided herein. Defendants shall pay plaintiff(s)' entire

costs of any such application including reasonable attorneys' and experts' fees, and the cost of discovery, preparation and presentation of their position.

(3) The Commission defendants or their successors in interest shall from and after December 31, 1985 treat all human fecal wastes which reach existing, expanded, or newly constructed treatment plants owned, operated, or maintained by the defendants by means of appropriate secondary treatment facilities which facilities shall as of December 31, 1986 and thereafter produce an effluent which does not exceed thirty (30) milligrams per liter (mg/l) suspended solids and thirty (30) milligrams per liter of five (5)-day carbonaceous biochemical oxygen demand (BOD<sub>5</sub>). From and after December 31, 1986, there shall be no by-pass at any existing, expanded or newly constructed treatment plant.

The effluent requirements for suspended solids and BOD<sub>5</sub> shall be calculated on the basis of the arithmetic mean of daily composite samples collected in a period of 30 consecutive days, provided that the arithmetic mean of the values for effluent samples collected in a period of 7 consecutive days shall not exceed 45 milligrams per liter; and provided further that the monthly average shall not exceed 15% of the average carbonaceous BOD<sub>5</sub> or suspended solids influent during the same period.

Fecal coliform counts in the effluent shall not exceed 200 per 100 milliliters as a smoothly geometric means and shall not exceed 400 per 100 milliliters as a weekly geometric mean. Fecal coliform requirements shall be calculated on the basis of twice weekly grab samples.

Phosphorus (P) concentrations shall be no more than one (1) milligram per liter based on a monthly average.

Defendants shall monitor both total residual chlorine and available free chlorine in the effluent.

(4) Plaintiffs have emphasized their concern to maintain a detailed understanding of defendants' progress in designing and constructing the facilities ordered by the Court. Defendants have agreed to and shall allow plaintiffs, during working hours and upon reasonable notice, to conduct a continuing engineering audit of defendants' progress in complying with this order and have agreed to permit plaintiffs (and persons designated by plaintiffs) complete access to all planning, testing, design and construction or operational work or materials prepared by defendants or their consultants. Defendants have also agreed to and shall promptly pay the reasonable charges or fees of persons designated by plaintiffs to conduct such continuing engineering audit provided that such engineering audit activities to be paid by defendants shall not exceed 50 man days per calendar year; and any of such required payments accrued or made during the course of appeal shall be and remain the obligation of defendants regardless of the outcome of any appeal.

(5) During the periods necessary to complete the facilities required for compliance with the provisions of this order, as set forth above, the defendants shall be permitted, on the basis of using the best engineering practices available within the limits of the capabilities of those facilities, to continue the operations of their respective sewage collection, treatment and discharge facilities as the same may be modified from time to time to comply with the requirements of this order. Existing disinfectant systems shall be maintained and operated in such periods and no new by-passes or overflows shall



be installed or operated during such periods except that prior to December 31, 1986 *and not thereafter* a by-pass may be installed and operated if required as a protective device to protect the South Shore Plant and then only if triggered at and operated during the existence of a flow rate equal to or greater than the plant flow capacity (260 to 316 mgd) for flow in excess of such capacity. In the event that plaintiff(s) challenge any overflow as being in violation of the provisions of this order for the reason that such overflow was not triggered by and limited to flows in excess of plant capacity, it shall be the burden of the defendants to prove in an evidentiary hearing preceded by adequate discovery by plaintiff(s) that such overflow was triggered by and limited to flows in excess of plant capacity. If the Court finds that the defense has not been proven, defendant(s) shall pay plaintiff(s)' entire costs of opposing any such defense including reasonable attorneys' and experts' fees and the costs of discovery, preparation and presentation of plaintiffs' position.

As set forth in paragraph (3) above, all by-passes shall be eliminated by December 31, 1986. If one or more additional temporary overflows become necessary in defendants' opinion in the defendant City of Milwaukee's system for operation to protect the public health prior to December 31, 1986, then defendants may apply to the Court for a modification of this paragraph 5 to permit operation of such additional overflows up to but not after December 31, 1986. All such overflows shall be eliminated by December 31, 1986. Any such modification, if opposed by plaintiffs, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiff(s). Defendants shall bear the evidentiary burden of proof establishing the

public requirements for such modification which shall be founded in such public health requirements as, but not limited only to, preventing the backing-up of sewage in basements. Defendants shall pay plaintiff(s)' entire costs of any such application including reasonable attorneys' and experts' fees and the costs of discovery, preparation and presentation of their position. Nothing herein shall relieve defendants or any of them from compliance with other applicable discharge standards.

(6) As a joint and several responsibility, defendants shall pay immediately to plaintiffs the amount of \$230,000.00, in the manner directed by plaintiffs, as costs of these proceedings, in lieu of following normal procedures to tax costs by the Clerk of this Court. Such sum in total shall be returned to defendants in the event judgment is reversed in toto; in no event shall defendants question the individual items or dollar amounts within such total.

(7) All burdens of proof set forth as requirements of this Amended Judgment Order shall be met by a standard of preponderance of the evidence.

(8) The Court hereby approves and orders the defendants to adhere to the schedules set forth in Exhibits 1 and 2 attached to the original Judgment Order in this cause for compliance with this Amended Judgment Order, excepting only the references therein to advance waste treatment. If defendants apply to the Court for modification of any component of the time schedules ordered herein, such modification, if opposed by plaintiffs or either of them, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendants shall bear the burden of proof

that such modification is required by causes wholly outside the control of the defendants or their agents, consultants or employees, and was in no way caused or contributed to by the negligence of the defendants or their agents, consultants or employees. The granting or denial of any such application shall be in the sound discretion of the Court.

(9) The Court hereby expressly reserves jurisdiction over the parties hereto and over the subject matter hereof to enforce the provisions of this Amended Judgment Order.

Entered: January 31, 1980

/s/ John F. Grady  
John F. Grady  
United States District Judge

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

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Case No. 72 C 1253

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PEOPLE OF THE STATE OF ILLINOIS, ex rel. WILLIAM J. SCOTT,  
Attorney General of the State of Illinois, *Plaintiff,*

and

PEOPLE OF THE STATE OF MICHIGAN, *Intervening Plaintiff,*

v.

CITY OF MILWAUKEE, WISCONSIN; CITY OF KENOSHA,  
WISCONSIN; CITY OF RACINE, WISCONSIN; CITY OF SOUTH  
MILWAUKEE, WISCONSIN; THE SEWERAGE COMMISSION OF THE  
CITY OF MILWAUKEE, and THE METROPOLITAN SEWERAGE  
COMMISSION OF THE COUNTY OF MILWAUKEE,  
*Defendants.*

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SUPPLEMENT #1 TO THE JUDGMENT ORDER

WHEREAS, one of the provisions of the Judgment Order herein relating to the Combined Sewer System area (CSO) is: "Should defendants develop information which establishes in defendants' opinion that separation of all or part of the system is a preferred alternative, which will provide a collection and treatment level equal to or better than that required herein, then defendants may apply to the Court for modification of this paragraph to provide therefor."; and,

WHEREAS, proceedings herein are not now stayed and the parties expressly agree that proceeding to secure the modification of the Judgment Order reflected herein is

without prejudice to the positions of the parties in respect of objections they have heretofore made herein or any appellate procedures now being or hereafter pursued by the parties or any of them; and

WHEREAS, the respective defendants have represented to the Court that in defendants' opinion it is the preferred alternative to totally eliminate overflows from certain portions of the CSO by means of storm sewer/sanitary sewer separation rather than to build a conveyance, storage and treatment system in those portions of the CSO; and

WHEREAS, the respective defendants have represented that the certain portions of the CSO, where such separation is the preferred alternative to a convey, store and treat system, represent approximately 8% of the CSO and that these portions are identified on the attached map (Appendix A to this Supplement No. 1 to the Judgment Order);

Now, THEREFORE, upon the subjoined stipulation of the parties, it is hereby ordered, adjudged and decreed that:

From this date forward defendants shall separate the sewer system in the portion of the Combined Sewer System Area (CSO) marked on Appendix A and upon separation such separated system shall be subject to the exact same requirement of the Judgment Order regarding sewage collection and elimination of overflows as all other areas covered by the Judgment Order which are outside the combined sewer system area.

Dated this 31 day of January, 1980.

/s/ JOHN F. GRADY



The foregoing order is hereby stipulated and agreed to and may be entered upon application of defendants as Supplement No. 1 to the Judgment Order herein without further notice.

People of the State of Illinois

By /s/ William J. Scott by  
Joseph V. Karaganis

People of the State of Michigan

By /s/ Thomas J. Emory for  
Frank T. Kelley  
Attorney General

The Sewerage Commission of the  
City of Milwaukee and the  
Metropolitan Sewerage  
Commission of the County of  
Milwaukee

By /s/ Edwin J. Zarwell  
Its Attorney  
City of Milwaukee

By /s/ Grant F. Langley  
Asst. City Atty.

N-1

## APPENDIX N

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

---

Case No. 72-C-1253

---

PEOPLE OF THE STATE OF ILLINOIS, ex rel., WILLIAM J.  
SCOTT, Attorney General of the State of Illinois,

*Plaintiff,*

PEOPLE OF THE STATE OF MICHIGAN,

*v.*

CITY OF MILWAUKEE, WISCONSIN; CITY OF KENOSHA,  
WISCONSIN; CITY OF RACINE, WISCONSIN; CITY OF SOUTH  
MILWAUKEE, WISCONSIN; THE SEWERAGE COMMISSION  
OF THE CITY OF MILWAUKEE, and THE METROPOLITAN  
SEWERAGE COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendants.*

---

### JUDGMENT ORDER

This cause having come on trial before this Court, and the Court having heard the witnesses and having examined the exhibits admitted into evidence, and the Court having heard the legal arguments for the parties, and the Court, on July 29, 1977, from the bench having announced its "FINDINGS OF FACT AND CONCLUSIONS OF LAW."

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED that the defendants CITY OF MILWAUKEE, SEWERAGE COMMISSION OF THE CITY OF MILWAUKEE AND THE METROPOLITAN SEWERAGE COMMISSION OF THE COUNTY OF MILWAUKEE and each of them and their agents, employees or successors in interest are hereby permanently enjoined from emitting sewage discharges, from the respective sewer pipes or structures owned or maintained by the defendants, into Lake Michigan or any of its tributary waters, except as hereinafter permitted in this order and said defendants are hereby ordered to:

- (1) The respective defendants shall in their respective jurisdictions eliminate all sewage overflows emanating from sewer pipes or structures owned, operated or maintained by the defendants located outside of the area which was designated by the defendants at trial as the Combined Sewer System Area hereinafter ("CSO"). Elimination of such overflows shall be completed on or before July 1, 1986. For purposes of this order, an overflow is defined as a cross-over, bypass, diversion structure, relief structure, pump station or any other device or mechanism by which human fecal waste is discharged directly or indirectly to public streams, rivers or lakes without collection and treatment according to the treatment methods and effluent limits set forth in paragraph (3) below. If, in defendants' opinion, completion by such date becomes impossible due to circumstances beyond the defendants' control, then defendant(s) may apply to the Court for an extension of time for completion. Any such application, if opposed by either plaintiff, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendant shall be required to prove the basis for and the necessity for such extension which extension shall be granted or denied in the sound discretion of the Court. Defendants shall pay plaintiff(s)' entire costs of any such application in-

cluding reasonable attorneys' and experts' fees, and the costs of discovery, preparation and presentation of their position.

(2) The Commission defendants shall in three stages, the first to be completed on or before December 31, 1985; the second on or before December 31, 1987; and the third on or before December 31, 1989, put into operation a collection, and conveyance system in the combined sewer system area ("CSO") which shall collect and convey all human fecal waste entering the sewers in the combined sewer system area. The first stage of such system shall have storage capacity of not less than 700 acre feet, the second not less than an additional 1290 acre feet, and at the completion of the third stage (December 31, 1989) the entire system shall have storage capacity of not less than 2605 acre feet and shall be designed and operated within such storage capacity so as to collect, convey and store the volume of flow and all human fecal waste capable of transmission by the combined sewer system. Defendants have analyzed rainfall events experienced during the period 1940 through the date hereof (which is the period for which detailed hourly rainfall data is available) and have represented to this Court that their analysis demonstrates that at a storage capacity of 2605 acre feet, there would have been no overflows from such a system. All fecal wastes and flows collected and conveyed from the combined sewer area shall be treated according to the treatment methods and to the effluent limits set forth in paragraph (3) below.

Overflows, if any, which do occur shall constitute a violation of this order unless defendants can prove as a defense to a charge of violation either:

(1) that the overflow resulted from runoff conditions which exceeded the capacity of the 2605 acre feet of storage at a pump out rate to advanced treatment of 110 CFS; and that the runoff events which

resulted in the overflow would have caused an overflow in excess of the design capacity of the 2605 acre feet storage system at 110 CFS under the identical scientific premises and calculations used by the defendants prior to the date of this order to design the size of such storage system; or in the case of overflows resulting from causes other than excess runoff events,

(2) that the overflow was wholly caused by actions or occurrences wholly outside the control of the defendants and was in no way caused or contributed to by the negligence of the defendants.

Any defense to an overflow violation shall be predicated on an evidentiary hearing preceded by an adequate opportunity for discovery by plaintiffs. Defendants shall bear the evidentiary burden of proof of establishing the defenses listed above, and if the Court finds that the defense has not been proven, shall pay plaintiff(s)' entire costs of opposing any such defense including reasonable attorneys' and experts' fees and the costs of discovery, preparation, and presentation of plaintiffs' position. In any event, any overflows which may conceivably occur shall be subjected to treatment by bar screens, followed by drum screens, followed by chlorination prior to discharge. Should defendants develop information which establishes in defendants' opinion that separation of all or part of the system is a preferred alternative, which will provide a collection and treatment level equal to or better than that required herein then defendants may apply to the Court for modification of this paragraph to provide therefor. Any such modification, if opposed by either plaintiff, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendants shall bear the evidentiary burden of proof of establishing that such modification equals or exceeds the level of protection provided herein. Defendants shall pay plaintiff(s)' entire costs of any such application including reasonable attorneys' and experts' fees, and the costs of discovery, preparation and presentation of their position.



(3) The Commission defendants or their successors in interest shall from and after December 31, 1985 treat all human fecal wastes which reach existing, expanded, or newly constructed treatment plants owned, operated or maintained by the defendants by means of appropriate secondary treatment facilities to be followed by treatment with chemical coagulation, sedimentation, and sand or multi-media filtration which facilities shall as of December 31, 1986 and thereafter produce an effluent which does not exceed five (5) milligrams per liter (mg/l) suspended solids and five (5) milligrams per liter of five (5)-day carbonaceous biochemical oxygen demand (BOD<sub>5</sub>). From and after December 31, 1986, there shall be no by-pass at any existing, expanded or newly constructed treatment plant. The effluent requirements shall be calculated on the basis of daily composite samples averaged on a 30 day consecutive basis, provided that the maximum effluent concentration discharged on any given day shall not exceed ten (10) milligrams per liter suspended solids and ten (10) milligrams per liter carbonaceous BOF<sub>5</sub>. The effluent shall be treated with chlorine, so as to achieve a free chlorine residual as measured by the amperometric test after 15 minutes residence time. If defendants conclude that some other disinfectant chemical or procedure will provide a level of protection equivalent to such chlorine treatment and is preferable, defendants may apply to the Court for a modification of this paragraph (3) to permit the use of such other disinfectant chemical or procedure. Any such modification, if opposed by either plaintiff, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendants shall bear the evidentiary burden of proof of establishing that the proposed modification will provide a level of protection equivalent to such chlorine treatment.

Maximum fecal coliform counts on any one grab sample shall not exceed 40 fecal coliform per one hundred (100)

milliliters. Phosphorous (P) concentrations shall be no more than one (1) milligram per liter bases on a monthly average.

(4) Plaintiffs have emphasized their concern to maintain a detailed understanding of defendants' progress in designing and constructing the facilities ordered by the Court. Defendants have agreed to and shall allow plaintiffs, during working hours and upon reasonable notice, to conduct a continuing engineering audit of defendants' progress in complying with this order and have agreed to permit plaintiffs (and persons designated by plaintiffs) complete access to all planning, testing, design and construction or operational work or materials prepared by defendants or their consultants. Defendants have also agreed to and shall promptly pay the reasonable charges or fees of persons designated by plaintiffs to conduct such continuing engineering audit provided that such engineering audit activities to be paid by defendants shall not exceed 50 man days per calendar year; and any of such required payments accrued or made during the course of appeal shall be and remain the obligation of defendants regardless of the outcome of any appeal.

(5) During the periods necessary to complete the facilities required for compliance with the provisions of this order, as set forth above, the defendants shall be permitted, on the basis of using the best engineering practices available within the limits of the capabilities of those facilities, to continue the operations of their respective sewage collection, treatment and discharge facilities as the same may be modified from time to time to comply with the requirements of this order. Existing disinfectant systems shall be maintained and operated in such periods and no new bypasses or overflows shall be installed or operated during such periods except that prior to December 31, 1986 *and not thereafter* a by-pass may be installed and operated if required as a protective device to pro-

tect the South Shore Plant and then only if triggered at and operated during the existence of a flow rate equal to or greater than the plant flow capacity (260 to 316 mgd) for flow in excess of such capacity. In the event that plaintiff(s) challenge any overflow as being in violation of the provisions of this order for the reason that such overflow was not triggered by and limited to flows in excess of plant capacity, it shall be the burden of the defendants to prove in an evidentiary hearing preceded by adequate discovery by plaintiff(s) that such overflow was triggered by and limited to flows in excess of plant capacity. If the Court finds that the defense has not been proven, defendant(s) shall pay plaintiff(s)' entire costs of opposing any such defense including reasonable attorneys' and experts' fees and the costs of discovery, preparation, and presentation of plaintiffs' position.

As set forth in paragraph (3) above, all by-passes shall be eliminated by December 31, 1986. If one or more additional temporary overflows become necessary in defendants' opinion in the defendant City of Milwaukee' system for operation to protect the public health prior to December 31, 1986, then defendants may apply to the Court for a modification of this paragraph 6 to permit operation of such additional overflows up to but not after December 31, 1986. All such overflows shall be eliminated by December 31, 1986. Any such modification, if opposed by plaintiffs, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiff(s). Defendants shall bear the evidentiary burden of proof establishing the public health requirements for such modification which shall be founded in such public health requirements as, but not limited to, preventing the backing-up of sewage in basements. Defendants shall pay plaintiff(s)' entire costs of any such application including reasonable attorneys' and experts' fees and the costs of discovery, preparation and presentation of their position. Nothing herein shall relieve defendants or any of them from compliance with other applicable discharge standards.

(6) As a joint and several responsibility, defendants shall pay immediately to plaintiffs the amount of \$230,000.00, in the manner directed by plaintiffs, as costs of these proceedings, in lieu of following normal procedures to tax costs by the Clerk of this Court. Such sum in total shall be returned to defendants in the event judgment is reversed in toto; in no event shall defendants question the individual items or dollar amounts within such total.

(7) All burdens of proof set forth as requirements of this Judgment Order shall be met by a standard of a preponderance of the evidence.

(8) The Court hereby approves and orders the defendants to adhere to the schedules set forth in Exhibits 1 and 2 attached hereto for compliance with this Judgment Order. If defendants apply to the Court for modification of any component of the time schedules herein, such modification, if opposed by plaintiffs or either of them, must be predicated on an evidentiary hearing preceded by adequate opportunity for discovery by plaintiffs. Defendants shall bear the burden of proof that such modification is required by causes wholly outside the control of the defendants or their agents, consultants or employees, and was in no way caused or contributed to by the negligence of the defendants or their agents, consultants or employees. The granting or denial of any such application shall be in the sound discretion of the Court.

(9) The Court hereby expressly reserves jurisdiction over the parties hereto and over the subject matter hereof to enforce the provisions of this Judgment Order.

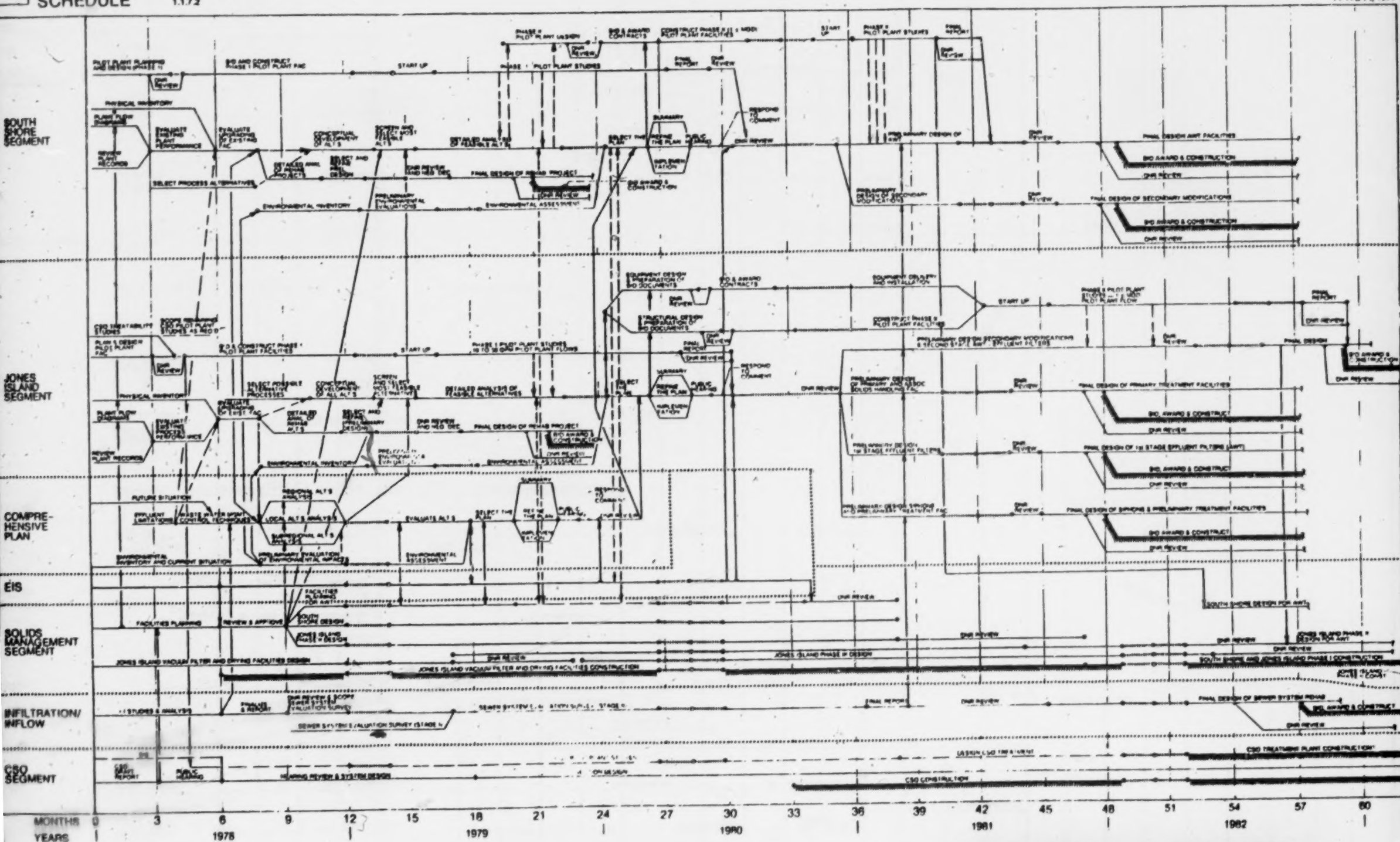
Entered: November 15, 1977

/s/ John F. Grady  
United States District Judge



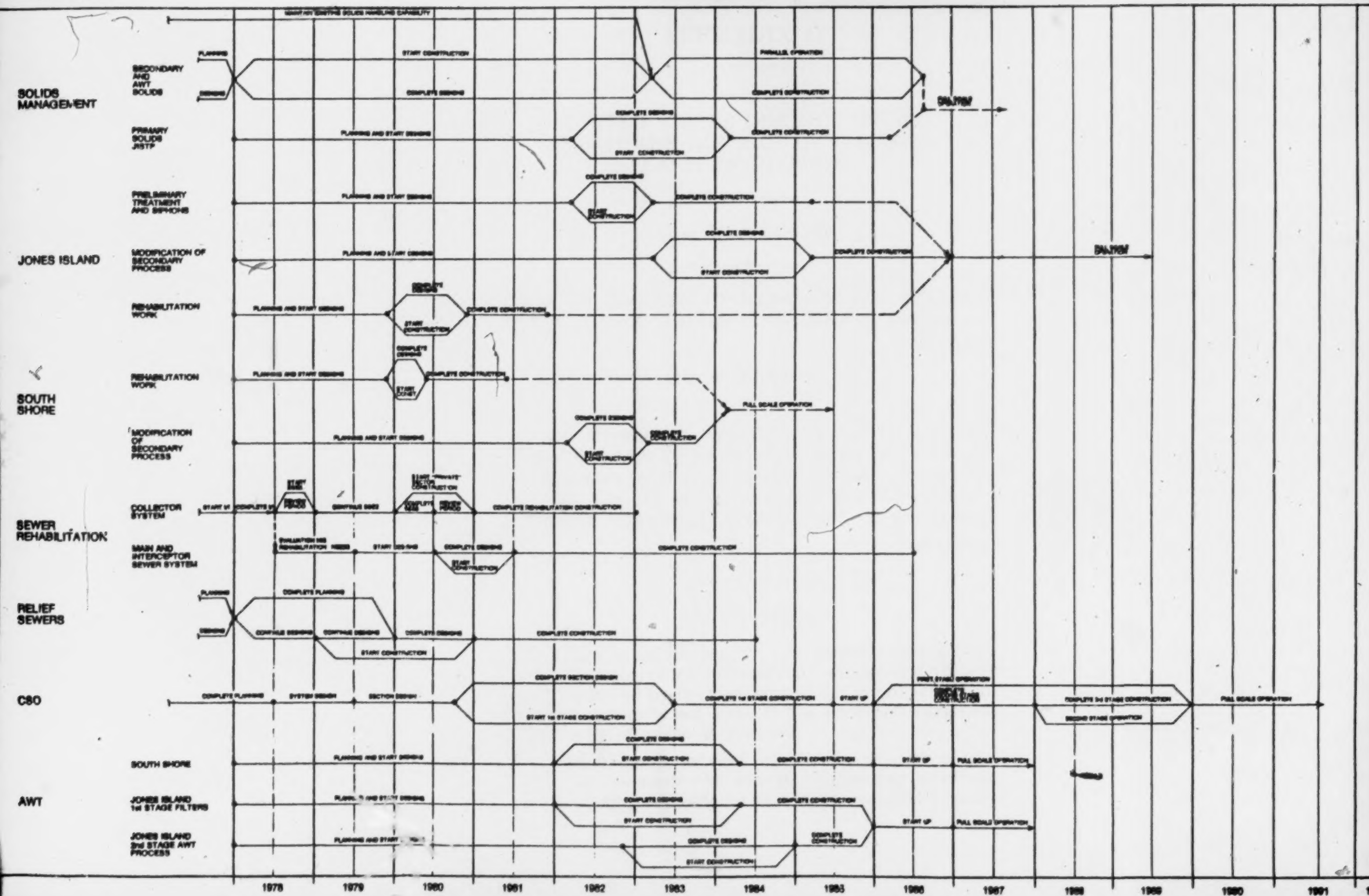
# EXHIBIT 1 MMSD FACILITY PLANNING SCHEDULE 1.1.72

11 NOV. 1977



BEST AVAILABLE COPY

EXHIBIT 2  
MMSD PROGRAM  
SCHEDULE 1.1.7.2





## APPENDIX O

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

---

Case No. 72-C-1253

---

PEOPLE OF THE STATE OF ILLINOIS, ex rel., WILLIAM J.  
SCOTT, Attorney General of the State of Illinois,

*Plaintiff,*

PEOPLE OF THE STATE OF MICHIGAN,

*v.*

CITY OF MILWAUKEE, WISCONSIN; CITY OF KENOSHA,  
WISCONSIN; CITY OF RACINE, WISCONSIN; CITY OF SOUTH  
MILWAUKEE, WISCONSIN; THE SEWERAGE COMMISSION  
OF THE CITY OF MILWAUKEE, and THE METROPOLITAN  
SEWERAGE COMMISSION OF THE COUNTY OF MILWAUKEE,

*Defendants.*

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### STIPULATION

It is hereby stipulated by and between the parties hereto that the relief necessary to achieve the effluent quality required by the decisions of this court heretofore rendered herein is set forth in the proposed Judgment Order, copy of which is attached.

The stipulation is entered into for the purpose of presenting to the court the specific engineering solutions, with scheduling and effluent standards, required to carry

out the general Findings and Conclusions and the general requirements which this court has imposed on the defendants herein in such decisions. Its submission is made to avoid the necessity of adducing extensive expert testimony before the court directed to the same purpose.

The parties agree to be precluded from asserting on appeal any challenge to the engineering feasibility (or to the engineering feasibility of the time schedules for installation) of the transport, collection and treatment facilities and the engineering feasibility of accomplishing the effluent standards set forth in the attached form of Judgment Order.

The parties also agree to be precluded from asserting on appeal any challenge to the engineering audit charges set forth in paragraph (5) of the attached form of Judgment Order and to be precluded from asserting on appeal any challenge to the payments of the trial costs set forth in paragraph (7) of the attached form of Judgment Order. The trial costs set forth in paragraph (7) shall be returned to defendants if Judgment is reversed in toto. The parties also agree to be precluded from asserting on appeal any challenge to the evidentiary burdens and future cost payments imposed by the attached order.

Other than as set out above, this stipulation is entered into without prejudice to the rights of any of the defendants to appeal from the ultimate judgment entered herein upon any and all grounds including without limitation: challenges to the jurisdiction of the court; assignments of error in the determinations of liability and of each and every element thereof; assertions that error has been committed in establishing the various levels of relief in the prior decisions herein; assertions that the findings are not supported by the evidence; and, assertions that the conclusions are not supported by the findings or the evidence.

Upon the foregoing understandings, agreements and stipulations it is further stipulated that a Judgment Order in the form attached may be entered upon motion of any party without further notice than this stipulation, it be-

ing expressly understood that defendants hereby agree to make the payments required by said proposed Judgment Order in accordance with the terms thereof when and if such proposed Judgment Order is entered by the court.

Nothing in this stipulation precludes any party from appealing the results of any future evidentiary hearing provided for in the attached Judgment Order on any grounds which are then appealable.

Date: November 14, 1977

People of the State of Illinois ex. rel.,  
William J. Scott, Attorney General of the  
State of Illinois

by: /s/ William J. Scott  
Its Attorney

People of the State of Michigan

by: /s/ Thomas J. Emery  
Its Attorney

City of Milwaukee, Wisconsin

by: /s/ Michael J. McCabe  
Its Attorney

The Sewerage Commission of the City  
of Milwaukee

by: /s/ Richard W. Cutler  
Its Attorney

The Metropolitan Sewerage Commission  
of the County of Milwaukee

by: /s/ Richard W. Cutler  
Its Attorney

**APPENDIX P**

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

---

-Case No. 72-C-1253

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PEOPLE OF THE STATE OF ILLINOIS, etc., et al.,  
*Plaintiffs,*

*vs.*

CITY OF MILWAUKEE, etc., et al.,  
*Defendants.*

---

BEFORE: The Honorable JOHN F. GRADY, Judge.  
Friday, July 29, 1977  
10:00 a.m.

Parties met pursuant to adjournment.

PRESENT:

MR. KARAGANIS  
MR. GAIL  
MR. EMERY  
MR. SCOTT  
MR. MOERKE  
MR. MOAKE  
MR. MC CABE  
MR. H. PITTS  
MR. MELIN

THE CLERK: 72 C 1253, People of the State of Illinois, ex rel. William J. Scott, Attorney General of the State of Illinois, et al., v. The City of Milwaukee, Wisconsin, et al.

THE COURT: Good morning.

MR. MOERKE: Good morning.

MR. MC CABE: Good morning.

MR. KARAGANIS: Good morning, your Honor.

### FINDINGS OF FACT AND CONCLUSIONS OF LAW

THE COURT: I would like to make some preliminary observations on two points of law which are pertinent to the way the court looks at the facts of the case.

I believe that I have jurisdiction to try all three causes of action that are asserted in the complaint. The United States Supreme Court in the case of *Illinois v. Milwaukee*, 406 U.S. 91 (1972), indicated that this is a case to be tried under the federal common law of nuisance, but it did not indicate that pendent jurisdiction to try the state claims would be inappropriate. I have concluded that the case should be decided under the principles of the federal common law of nuisance, but I further believe that the elements required under that cause of action are also the same elements which the court would have to find under the two state claims. Therefore, in my view, it makes no practical difference that the Court is taking the case on all three counts.

The second legal question of preliminary significance is the matter of the burden of proof. What is the standard to be applied? There are the cases which indicate that in controversies between sovereign states, principles of comity require clear and convincing evidence before the right of any state is circumscribed at the instance of another state. And the Supreme Court did not indicate in the case of *Illinois v. Milwaukee* that this was not a case between states. Indeed, by saying that it did have original jurisdiction to try the case concurrent with the



jurisdiction of the district court it seems to me that the Supreme Court implied that this is a suit involving different states. Yet the Court did not say that expressly.

I do not believe that it is a suit between states. It would seem to me anomalous to say that the municipalities and agencies that are involved as defendants in this case are the same as the State of Wisconsin when the fact is that the State of Wisconsin has sued these same municipalities and agencies about subject matter closely related to the subject matter before me. The State of Wisconsin has sued these defendants about the matter of sewage disposal. If the proposition that one cannot sue oneself is as self-evident to you as it is to me, you may agree with me that the State of Wisconsin, at least for purposes of this case, is not the same as the defendants.

I believe that the preponderance of the evidence is probably the standard of proof that is appropriate for this case. Here again, however, due to the way I view the evidence, there is no practical difference in the result I reach, regardless of which standard of proof I employ.

Turning now to the facts of the case, I note that some of the salient ones are not disputed between the parties. For instance, it is not disputed that parcels of water from the Milwaukee area do travel past the state line to the south and do transport materials from the Milwaukee area to the State of Illinois. As another example of an important fact that is not in dispute, the defendants and the plaintiffs agree that sewage overflows and discharges of raw sewage into the lake are undesirable.

There are more facts, however, that are in dispute than are agreed upon, and the nature of the factual dispute is such that I have found it necessary to rely upon expert witnesses to a far greater degree than is normally required in an ordinary lawsuit and even in the typical suit involving matters of science and technology.

Ordinarily, when the trier of fact weighs evidence and attempts to come to factual conclusions, he does so in the

light of his own experience and his own observations and his own common sense. Not only is this proper to do, it is something that we specifically instruct juries to do in every jury case.

The nature of the subject matter here, however, is such that my own experience and observations in life are of relatively little use to me. It is well known to all of us that the arcane subject matter of some of the expert testimony in this case was sometimes over the heads of all of us to one height or another. I would be certainly less than candid if I did not acknowledge that my grasp of some of the testimony was less complete than I would like it to be, but short of enrolling in a university course directed toward a reorientation of my entire education and spending the years that that would involve, I know of no remedy for the problem.

What I have had to do, though, because of the problem, is to rely to a very large extent upon expert witnesses whose credibility impressed me favorably. Both sides have produced in this case expert witnesses whose credentials were impressive, if not overwhelming. Very little effort has been spared by either side to present witnesses who were knowledgeable in the numerous areas of science and technology that are involved in this case.

I think all of these witnesses are interested in the outcome of this case. None of them is neutral as between the parties in this case or as to the hoped for outcome of the case. This is not surprising. These people devote their lives to a study of the questions which confront us here. In doing that, they necessarily come to conclusions and reach points of view and become members of schools of thought on subjects pertinent to this inquiry. That, standing alone, does not make the witness biased in any invidious sense. I have found some witnesses in this case who, despite their obvious commitment to particular points of view, were in my opinion honest, forthright, reasonably objective and who, in my opinion, made a genuine effort to be helpful to me in the resolution of these difficult problems.

I am going to make some comments about some of the witnesses during the course of my remarks today because I believe it will be helpful to the parties in understanding the basis for my decision, and helpful to the reviewing courts in passing upon the validity of the decision I make, to know what I thought of the witnesses. I have re-read some of the testimony since I saw you last. I thought about someone approaching that task for the first time, without having seen the witnesses, observed their demeanor, seen the interaction between the witnesses and counsel, the interaction between the witnesses and the court, and sometimes even the interaction of the witnesses between themselves in the courtroom. Without the benefit of all those observations, it seems to me that it will be a very difficult task for a newcomer to the case to have the kind of grasp he would like of the probable credibility of the various witnesses. And, therefore, to assist anyone who does read this record, at least to the extent of letting him know what I thought, I am going to make some observations; and I do it for that reason only and not to be unkind or to denigrate anyone unnecessarily.

There were four witnesses in the case who I thought were outstanding. They were outstanding in the sense that they were the best of a number of good witnesses. These were the witnesses Geldreich, Tierney, Wellings and Culp. There was another group of witnesses I felt as almost equally helpful to the court and of very high caliber, both in terms of their competence and in terms of their credibility. Those were the witnesses Carter, Cliver, Katz, Berg, and Mack.

The limnologists were in a class by themselves. It was perhaps accidental but nonetheless significant that they were even treated as a separate class in that they were permitted to sit through the testimony of other witnesses. The limnological testimony was the least conclusive, the least satisfying, the least convincing of any of the testimony in the case. This is no reflection upon the witnesses who gave it but rather a statement describing the state of the art. What we do not know about what

goes on in Lake Michigan far exceeds what we do know, and all of these persons readily acknowledged that. The limnologist whom I found most helpful, and upon whom I rely with the greatest feeling of comfort is Dr. Schelske.

There were some witnesses I felt were biased in the undesirable connotations of that term. These witnesses were biased either because they have a personal commitment to one of the parties in the case or because of their devotion to a particular point of view. Some of these witnesses were combative and unwilling to concede points on cross examination which they should have conceded because they were so obvious. They were on occasion evasive and doctrinaire. These were the witnesses Verber, Zanoni, Pritchard, Fitzgerald, Sproul and Gupta.

The case breaks down into two principal subject matter areas. The first is the matter of public health, and I will address myself to that now.

The defendants in this case discharge disease-causing bacteria and viruses to Lake Michigan in two ways. First is the raw sewage which is discharged to Lake Michigan during wet weather periods through devices known as overflows, by-passes and cross-overs from the sanitary sewer system to the storm sewer system.

The second way in which these pathogens are discharged to the lake is in the form of insufficiently treated sewage effluent discharged from the two sewage treatment plants owned and operated by the defendants. The pathogens are in the effluent for several reasons. One reason is that the treatment time is often insufficient, due to overloading of the plants, and there is not sufficient time to settle out the solids in the sewage. These solids interfere with chlorination, so that the chlorine does not reach the pathogens. Even when the plant is not overloaded many of the solids still fail to settle out.

The defendants attempt to conform their effluent to a standard of 30 parts per million of suspended solids and BOD, but they rarely achieve that standard and concede that before they can meet it with any consistency a

substantial amount of additional plant renovation and updating will have to be done; but even if a 30/30 standard were met, it is my finding that that standard would still result in the discharge of staggering numbers of pathogens to Lake Michigan.

These pathogens, once they are discharged to the lake, are on occasion transported by the currents to the waters of the State of Illinois. We know this for several reasons. First of all, both sides concede that on a number of occasions throughout the year, there are currents of sufficient persistence in a southerly direction and of a sufficient speed to transport from the Milwaukee area pathogens which will still be alive when they reach the Illinois state line.

The bacteria live on the order of four to eight days in the water, and there is a phenomenon known as regrowth, which can result in a substantial replacement of bacteria which die by the birth of new bacteria occurring during the southward flow. Viruses, which I regard as the more serious of the two principal types of pathogens with which we are concerned, live for a week and a half or two weeks in warm water and can live for months in colder water.

There is no doubt that viruses and bacteria have a long enough life span to reach Illinois in the persistent currents which occur a number of times a year. How many times a year this occurs is, of course, impossible to state with any certainty. The plaintiffs' experts estimate something like a dozen times a year. The defendants' experts estimate that it is more like four times a year or possibly even two times a year. But both sides concede that their estimates could be off either on the high side or on the low side.

In addition to the die-off of the pathogens themselves, there is another factor which ameliorates the problem to some extent, and that is the phenomenon of dilution. The water which comes down in a parcel doesn't come down intact in the exact form that it left Milwaukee Harbor. Rather, it dilutes with the other water in the lake.



The experts are in conflict as to the amount of dilution and even as to the proper scientific principle to be applied to determine the amount of dilution. Notwithstanding that dispute—which I resolve in favor of the plaintiffs on the basis of what I perceive to be the greater credibility of their witnesses on the subject—there still is not sufficient dilution to eliminate the viruses and the bacteria from the water which we know arrives in Illinois from Milwaukee on some occasions during the course of the year. There is no reason not to believe that bacteria and viruses numbering literally in the millions are transported live and intact from Milwaukee to Illinois waters.

The defendants produced a considerable amount of testimony designed to show that the matters of which I have just spoken do not in fact occur or at least do not occur on a scale sufficient to constitute a health hazard to the residents of Illinois. An organization known as Envirex conducted certain studies designed to show that the sewage, when it comes out of the Milwaukee River and when it comes out of the treatment plants, is almost immediately diluted to a degree that only insignificant numbers of pathogens and insignificant amounts of other pollutants could reach Illinois waters, if any could reach Illinois waters at all. These were known as the net studies and the shore studies conducted by Envirex.

I attach almost no weight to these studies. They were conducted without adequate information as to the prevailing conditions, so that the results were impossible to interpret. I refer specifically to the fact that these studies designed to show that currents running to the south would not carry materials to the south were conducted by people who did not know which direction the currents were going in at the time they conducted the studies and took their samples. Neither did the persons who conducted the studies know where on the hydrograph and where on the pollutograph they were at the time they conducted their wet weather studies.

Furthermore, to the extent that these studies show an apparent decrease in the number of fecal coliforms con-

tained in the top three feet of the water, they demonstrate nothing about the number of viruses that might have been in that top three feet of the water. The evidence is clear on both sides that you can have zero fecal coliforms and many viruses in the same parcel of water.

Moreover, the number of samples taken was insufficient. And the depth at which the samples were taken was insufficient to reflect the probable counts which might have been found at other levels.

Something which infected those studies from the outset and which perhaps accounts in some degree for the invalid methodology with which they were conducted was the attitude of Dr. Zanoni, who was in charge of them. It is not simply a matter of inference that Dr. Zanoni started with the conclusions that he wished to reach and then fitted the data into those conclusions. It is a matter of his express acknowledgment from the witness stand that that is what he did.

If one were to look for a model of how a scientific study should not be conducted, I would commend him to the record of the Envirex net and shore studies. Dr. Zanoni was unwilling to recognize the slightest suggestion that the conclusions which he had reached were not borne out by his data. I could give many examples. I will give simply one. On his direct examination, he testified that the numbers of fecal coliform found in his samples were consistent with the numbers found by the City of Milwaukee in their samples and that this supported his conclusions. On cross examination it was pointed out to him that just the contrary was the case, that there were rather marked discrepancies between his figures and those obtained by the City. Dr. Zanoni's response to that was that he did not know whether the sampling methods conducted by the City were valid. They had been valid enough in his mind for him to tell me on direct examination that they confirmed his own findings, but when it appeared that they did not confirm his findings, he suddenly decided that there was something wrong with their sampling

technique. When pursued further as to what their sampling technique was, it developed that he had not the slightest idea of what it was and had no reason whatsoever to suspect that there was any deficiency in it. I give this as one example of many that will be found by anyone who reads the record of Dr. Zanoni's testimony.

Another study conducted by Dr. Zanoni and Mr. Carter was the fecal coliform die-off study. To a lesser extent than in the case of the net and shore studies, this particular experiment is inconclusive at best. Again, only the top three feet of the water column were sampled. The number of samples taken was not small. The amount of water sampled was only a fraction of the sample size recommended by standard methods. The die-off line which resulted from the study seems to me to have been put askew by an improper starting point. Finally, as I indicated earlier, the numbers of fecal coliform found in any level of the water column bear no particular relation to the number of viruses that might be found there.

Now, the State of Illinois had an opportunity to conduct its own study of the kind that Envirex conducted. It elected not to do so. In so electing, it is my opinion that the state chose to produce less evidence than it should have. My guess as to why they elected not to conduct their own study is that they were afraid of a negative result. Conducting such studies is dangerous because, of course, they cut both ways; but if the position of the State of Illinois is correct, as I believe it is, a properly conducted study should have resulted in some circumstantial evidence that would tend to confirm that theory.

The test would have had to be conducted without the infirmities that I have mentioned in regard to the Envirex studies, and that could have been done. In fact, negative results would not have been fatal to the plaintiffs' case.

Once these pathogens arrive in Illinois waters, they can infect and cause disease in residents of Illinois. This takes

place in two ways: by ingestion of these waters at bathing beaches by swimmers and by ingestion of drinking water containing these pathogens.

The defendants' answer to this is that in regard to the bathing beaches, the risk is minimal because the numbers off pathogens are small, and that as far as drinking water is concerned, the treatment plants may be relied upon to remove any harmful organisms.

In regard to the bathing beaches, I am satisfied that the persons who use those beaches cannot do so with safety if there are any significant numbers of viruses in the water. There is a question as to how many viruses it takes to cause an infection. I can't solve that one. The experts are not in agreement, but I believe, first of all, from the evidence I have heard, that the number is small. If one virus is insufficient, it still need not be hundreds. Moreover, the evidence shows that any viruses which do reach Illinois waters are likely to do so in great numbers.

There are fecal coliform counts on Illinois beaches which fail to demonstrate any pollution coming from Milwaukee, but again, that does not prove that viruses are not in the water.

As far as the treatment plants are concerned, the testimony of Dr. Wellings convinces me that viruses do get through water filtration plants attached to and embedded in solids, which can go through the filters of those plants, both when the plant is being operated properly and even more so should the plant experience a breakdown.

The defendants submitted evidence that there is a substantial diminution of the number of viruses which enter a sewage treatment plant before the effluent is discharged into the lake. There is no question that that is so. I think, however, that the primary factor which accounts for that is sedimentation. I do not believe from the evidence that there is any bacteriological kill of the viruses in the activated sludge process. I feel that Dr. Sproul's conclusions in that regard were based upon in-

sufficient information. I agree with Dr. Wellings' analysis of the Moore study on that subject.

Despite the large percentage of viruses which are deactivated and removed in the process of sewage treatment, there is no question that large numbers of them do get through and are discharged to the lake because of the insufficient treatment of the solids in the effluent. I am satisfied from the testimony of Dr. Wellings and other witnesses in the case that unless there is a good removal of solids and a free chlorine residual, there is not an adequate kill of viruses. There is evidence in the record on both sides of the case which I find convincing on that point. The defendants never have a free chlorine residual by the amperometric test, which I find from the evidence is the more valid of the two methods of measuring a chlorine residual.

The defendants also argue that there is no evidence of any outbreak of water related diseases in Illinois, and this is true. However, I am persuaded by the expert testimony that the diseases caused by the pathogens in sewage are mostly of the kind, if not all of the kind, that are not likely to be reported, and if reported, are not likely to be diagnosed as a viral disease or even as a bacteriological disease related to water.

The expense and the time and the effort involved in identifying and isolating a virus which may have caused an infection in an individual who does present himself for medical treatment is so great that the effort is rarely undertaken. Therefore, I find that the absence of any reported outbreak of enteroviral diseases or of shigellosis or salmonellosis, or any of the other bacterial diseases, does not demonstrate that such diseases are not being contracted by residents of Illinois by reason of their exposure to waters of Lake Michigan which contain pathogens.

The diseases that are water-borne are generally not fatal diseases, but they are debilitating diseases. They are serious enough to be deemed a genuine health hazard and a legal nuisance. This is a value judgment, and perhaps



someone else may feel that the symptoms of hepatitis and encephalitis and the other diseases shown by the record are not sufficient to constitute a nuisance. But that will be for someone else to say.

I feel that exposure to such diseases does warrant a legal remedy. The hazard is immediate, in that it is existing now. It existed yesterday. It will exist tomorrow. The defendants argue with considerable force that the mere possibility that an Illinois resident will contract a water-borne disease is insufficient to warrant the relief sought by the plaintiffs. They ask for the evidence of the actual outbreak of disease, the actual incidence of stomach aches and diarrhea and various symptoms which one might expect to find.

There are two problems with that approach. The first is that it is impossible to demonstrate that any particular disease contracted by any particular individual was contracted as a result of drinking water contaminated by reason of Milwaukee's sewage. If the defendants want that kind of evidence, as they do, they will never receive it. It is impossible to produce.

The second problem with that approach is that it ignores the fact that exposure to a hazard, whether or not that exposure results in the actual contraction of a disease, is itself actionable. On the virtually undisputed evidence in this case, there is some degree of hazard to the residents of Illinois from Milwaukee's sewage. It is the degree of that hazard which is in dispute. Prevention is what public health is all about. Prevention is what equitable relief is all about, and it is not necessary to wait until an actual outbreak occurs to do something to prevent it. If you wait until it occurs, then, at least to that particular injury, you have waited too long.

There are some expressions in some of the cases which I think are pertinent, and I would like to read briefly from the case of *Missouri v. Illinois*, 180 U.S. 208, at pages 242 and 244. This case had to do with an effort by the State of Missouri to enjoin the City of Chicago

from discharging its sewage to the river system and thereby allegedly polluting the Mississippi River. The position of the State of Illinois at this juncture of that particular litigation was that there had been no showing of any harm as yet, and the Supreme Court of the United States said:

"In the first place, it is urged that the drawing by artificial means, of the sewage of the City of Chicago into the Mississippi River may or may not become a nuisance to the inhabitants, cities and towns of Missouri; that the injuries apprehended are merely eventual or contingent, and may, in fact, never be inflicted. Can it be gravely contended that there are no preventative remedies, by way of injunction or otherwise, against injuries not inflicted or experienced, but which would appear to be the natural result of acts of the defendant, which he admits or avows it to be his intention to commit?"

\* \* \* \*

"The nature of equitable remedy in the case of public nuisances was well described by Mr. Justice Harlan speaking for the court in the case of *Mugler v. Kansas*, 123 U.S. 623, 673: 'The grounds of this jurisdiction in cases of purpresture, as well as of public nuisances, is the ability of courts of equity to give a more speedy, effectual and permanent remedy than can be had at law. They can not only prevent nuisances that are threatened, and before irreparable mischief ensues, but arrest or abate those in progress and by perpetual injunction protect the public against them in the future; whereas courts of law can only reach existing nuisances, leaving future acts to be the subject of new prosecutions or proceedings. This is a salutary jurisdiction, especially where a nuisance affects the health, morals, or safety of the community.' "

Another case which is pertinent to this point is the case of *Harris Stanley Coal and Land Company v.*

*Chesapeake and Ohio Railway Company*, 154 F. 2d 450, a case decided by the Court of Appeals for the Sixth Circuit. The court said at page 454:

“Though no injury had yet been shown to have been incurred by the railroad, possible future injuries may be enjoined . . . (citations omitted) and suits are not premature because the plaintiff does not await an actual test of the results of a proposed or threatened act.”

It seems to me that in some of the arguments the defendants have presented in this case, they have confused two things. One is the elements of the cause of action which the plaintiffs must prove, and the other is the standard of proof by which those elements must be proved. The defendants contend that the evidence must be clear and convincing. I am adopting that view for purposes of this case. The second question is: What must the clear and convincing evidence show? The defendants take the view that because the evidence must be clear and convincing, it must show an actual injury. Otherwise, it is not clear and convincing. It is my view and my understanding of the law that what the plaintiffs must show by clear and convincing evidence is the existence of a hazard, whether or not that hazard has in fact eventuated in an injury. The hazard itself is the injury justifying injunctive relief in this kind of case.

I find from what I regard as clear and convincing evidence that the discharge of sewage by the defendants into Lake Michigan constitutes a health hazard of serious magnitude to the residents of the State of Illinois and that, unless enjoined by this court, that danger will continue to exist.

I turn now to the second phase of the case, that involving the matter of accelerated eutrophication of Lake Michigan.

I have no doubt whatever from the evidence in this case that the amount of phosphorus in Lake Michigan is increasing. No one knows how much phosphorus was in the

lake 20 years ago, nobody knows how much phosphorus was in the lake yesterday; but what is clear from the evidence beyond any doubt is that when phosphorus is put into the lake, it stays there for a long time. It stays there either in solution in the water itself or in the biomass — the algae, the organisms, both animal and vegetable, which use phosphorus in their life cycles — or it is in the bottom sediments, from which it can be recycled, that is, put back into solution over time.

A lot of numbers were testified to in this case. I think the one that was the most impressive to me was the number 100. It takes 100 years for Lake Michigan to empty itself into Lake Huron. It is literally a cul-de-sac which can be victimized by mistreatment in a manner that other lakes and water courses of greater defensive capability cannot be victimized.

Lake Erie, which is considered by all to be a polluted lake, at least in its western basin, renews itself in three years, because it is a shallow lake and a much smaller lake than Lake Michigan. Yet, we have seen that in the lifetime of most of the people in this room, Lake Erie has gone from a lake that was described as oligotrophic to one that is considered eutrophic and a source of serious concern to the persons who depend upon it.

I find that as a result of the inputs of phosphorus and other nutrients to Lake Michigan, the lake is undergoing accelerated eutrophication. Accelerated eutrophication is that eutrophication which is caused by man, as opposed to the eutrophication which occurs inevitably and naturally.

The evidence of the accelerated eutrophication is the decrease in dissolved silica, which I find is due to its utilization by diatoms; a decrease in the diatom population; and an increase in blue-green algae, both in the in-shore zone and the off-shore zone.

Dr. Shapiro's theory that the problem is caused or that the manifestations I have referred to, if they exist at all, are caused by alewives rather than by phosphorus, is, I

think, a less likely and less reasonable explanation. I agree with Dr. Schelske that the more logical and natural explanation is that the phosphorus inputs from both point and non-point sources have caused these phenomena.

Accelerated eutrophication results in taste and odor problems in the lake water. In an advanced state, this odor problem can affect the use of the water for recreational purposes, and even in a less advanced stage, it can cause problems with drinking water. I was impressed by the fact that the City of Green Bay, Wisconsin, which is located right on Green Bay, does not get its drinking water from Green Bay. Instead, it goes clear across the Door Peninsula, a distance of 50 miles or more, and brings its drinking water from Lake Michigan. The reason, of course, is that Green Bay, a large embayment of the lake, does not offer drinking water of the quality desired by the residents of that city.

The reason it does not is that the southern portion of Green Bay has undergone accelerated eutrophication and is a eutrophic part of the lake.

In addition to the odor and taste problems caused by eutrophication, there is a loss of the clarity of the water, which is an aesthetic value important to many people, and I think rightly so. A secchi disc in Lake Superior can be seen at a depth of 60 feet. In Lake Michigan it can be seen at a depth of 10 to 15 feet only. Lake Superior is an oligotrophic lake. Lake Michigan is becoming a lake which exhibits the turbidity typical of lakes inhabited by increasing populations of algae.

The accelerated eutrophication caused by these nutrient inputs is far greater in the in-shore zone than it is in the off-shore zone, but there is no reason to believe that the eutrophication found in the in-shore zone will not spread, and, if not stopped, that it will not spread clear across the lake. That is the way it happened in Lake Erie. The in-shore zones began to exhibit manifestations of eutrophication. The confident predictions of various experts that the problem would remain there were not borne out by what actually occurred.



Lake Michigan, of course, is a bigger lake and a deeper lake. But I have heard nothing in this evidence to persuade me that there is any reason to believe that the same process will not occur in Lake Michigan, except it will take longer.

I find that the waters of Lake Michigan within the territorial boundaries of the State of Illinois are undergoing a process of accelerated eutrophication at the present time and that this process is caused by nutrient inputs, some of which emanate from the defendants. As has been pointed out by everyone in this case, there is no method of identifying any particular molecule of phosphorus or nitrogen or any other chemical as having come from a particular location. But because the waters of the in-shore zone interchange with each other and do mix longitudinally along the shore, it is a fact, both inferrable circumstantially and deducible as a matter of logic, that all inputs of nutrients along the western shore contribute to the accelerated eutrophication of the entire western shore line.

The benthic studies do not persuade me of anything either way. Dr. Otto was frank enough to admit that their purpose was not to demonstrate the absence of any long-term eutrophication process. But neither did those studies convince me that there are not perceptible short-term changes.

The Fitzgerald cladophora study was effectively rebutted by the testimony of the witness Renz. In fact, I felt that the testimony of Dr. Fitzgerald, when viewed in the light of those jars of cladophora that Mr. Renz was able to collect with no effort, was misleading, to say the least.

Because of the interchange of water between the in-shore zone and the off-shore zone and the eventual mixing of the entire lake, the State of Michigan is exposed to injury and is being injured by the discharges of nutrients by these defendants.

There is no evidence of any present effect of Milwaukee discharges or, for that matter, of the effect of any other nutrient discharges, on fish life in the lake. It does not appear to me that the plaintiffs attempted to adduce such evidence. The matter was simply adverted to in passing from time to time, but the evidence was insufficient to prove that the disappearance of the whitefish or the lake trout or any of the fish species which are in trouble in Lake Michigan is caused by nutrient inputs. There is, however, evidence in the record from both sides that in-shore eutrophication is very likely to cause eventual problems with the spawning grounds of most of the types of fish which inhabit the lake. Therefore, in that sense I think that the matter of in-shore eutrophication is relevant to the question of fish, not presently, but in terms of a danger which definitely exists for the future.

There is no evidence that any specific algal problem or any specific taste and odor problem experienced by residents of Illinois or Michigan is attributable to Milwaukee's sewage as opposed to the nutrients discharged by any other point or non-point source. This, indeed, is the nature of this problem. It is not possible to segment nutrient inputs and ascribe this part to one source and another part to another source. All point and non-point sources combine to create the totality of nutrient inputs to the lake.

This case has to be looked at in a temporal way differently than the ordinary nuisance case is looked at. Some of the problems we may have in analyzing the facts of this case and applying the law to those facts arise from the difficulty of analogizing the situation involved here to the more typical nuisance situation. In this case we are concerned with an injury which is occurring in very small parts over a long period of time, a time not measurable by any specific finite event. It is measured in decades if not in centuries and if not in geologic time. Lake Michigan is a resource that will be relied upon by the people who reside in its basin for all time to come — for as long as this planet is inhabited by human beings — and, there-

fore, the parameters of a nuisance in regard to that lake must have a temporal aspect consistent with that long term human need for the use of that lake.

We have given some attention to the nature of the defendants in this case as being municipal corporations possibly identical with the sovereign state of Wisconsin. I think the nature of the plaintiffs is something that we should consider as well. This is not an individual plaintiff suing on behalf of himself or even representing a presently existing class. The plaintiffs here are states who represent people who are now living and generations to come, and those generations to come have interests which are every bit as important as the interests of those of us who are alive today. This is not simply an expression of a matter of philosophy. I believe it to be a statement of the law.

The defendants have frequently asked questions of witnesses couched in terms of whether there is any "measurable" effect on the lake caused by Milwaukee's discharges, or whether, if Milwaukee's discharges were altogether discontinued, there would be any "measurable" diminution in the amount of nutrients in the lake. The question really answers itself. It is impossible to measure accurately. It is possible only to estimate, and sometimes the estimates are not based upon empirical data but are really a kind of logical or mathematical analysis; but the fact that the inputs are not measurable or the outtakes, if you will, would not be measurable in terms of their effect, does not mean that the effects do not exist, any more than the absence of someone to hear a tree fall in the forest means that it does not make a sound when it falls.

The defendants argue seriously and I believe sincerely that their discharges to the lake must be viewed in terms of the total discharges to the lake, both point and non-point, and that it is unfair to single them out, as they think has occurred in this case.

There was evidence produced as to the loadings to the lake. It was hardly satisfactory. The testimony of Dr.

Zanoni as to point and non-point loadings I regard as altogether speculative and unreliable. He relied upon documents which, as it turned out, he had not even read, and when those documents were analyzed on their own merits, they turned out to have serious deficiencies. I give no credence to the Envirex material in regard to nutrient loadings to the lake. I think the Schelske estimate, while obviously subject to a great possibility of error either way, is nonetheless a more reliable kind of approach to the problem.

In any event, I believe that one million pounds of phosphorus from the treatment plants alone, without considering additional phosphorus discharged by the overflows, is a significant input to the lake, and its removal would be a significant removal. We know that Milwaukee is the biggest point source on the lake and that, of the total point sources on the lake, the Milwaukee discharges constitute a substantial percentage.

Now, does the fact that we have little or no ability to control non-point discharges to the lake means that we ought to ignore the point discharges? I think the answer to that is no. There is a statement contained in the case of *Barrett v. Mount Greenwood Cemetery Association*, 159 Ill. 385, 390, 42 N.E. 891 (1896), which I think is appropriate:

"But we know of no rule of law that sanctions one wrong because another has preceded it. It is doubtless true that streams of water cannot be kept as pure when flowing through lands occupied by populous communities as when flowing through sparsely settled lands, but these effects that *unavoidably* arise from the occupation and cultivation of the soil by man do not justify the *deliberate* pollution of the stream of water flowing through another private property, in order that the interests of private persons, or even the public, may be enhanced thereby." (emphasis added.)

There is a second basic fallacy in the defendants' argument, I believe. There can be no doubt that the combined discharges of all point sources contribute substantially to the eutrophication of the lake. If any one point source can defend successfully on the ground that its discharge alone is not causing the problem and that without its discharge the problem would still exist, then that defense must be equally available to all point dischargers. We cannot have one law for Milwaukee and another law for Waukegan, the North Shore Sanitary District, Gary and Muskegon. The law must be uniform, especially since we are dealing with the federal common law of nuisance, which the United States Supreme Court has said is peculiarly adaptable for use in the solution of interstate water problems.

I believe the law is that one discharger who contributes an aliquot of a total combined discharge which causes a problem may be enjoined from continuing his discharge. Either that is true or it is impossible to enjoin point discharges. If Milwaukee is entitled to discharge raw sewage into the lake and insufficiently treated sewage into the lake on the magnitude of 320 million gallons a day or more during wet weather periods, then can anyone say to Waukegan, Illinois, with a discharge of 10 million gallons a day, that it may not do the same thing? In fact, I have not done the computations, but I would think that 10 million gallons of raw sewage from Waukegan each day would not equal the total nutrient loadings that are going into the lake from Milwaukee's treated effluent. So, if the rule contended for by the defendants were to be the law, it seems to me it would follow that Waukegan would be entitled to discharge raw sewage into Lake Michigan.

I hesitate to make this analogy because there are probably things wrong with it, but it seems to me that in a case of this kind, where one is not dealing with a finite point, either in space or in time, but rather with a continual process affecting a natural body of water the size of Lake Michigan, that the law of nuisance involving numerous polluters is very akin to the law applicable to



joint tortfeasors. Each person who contributes to the injury is liable, not for the conduct of anyone else, but for his own conduct in that it forms part of the cause of the total injury.

So both on the basis that I feel the evidence shows Milwaukee's discharges are of themselves a significant cause of pollution to the lake and, secondly, because undeniably its contribution to the total nutrient discharges to the lake cannot be isolated out either factually or legally, I reject Milwaukee's defense based upon lack of measurable contribution.

Viewed in this light, the argument about balancing the equities is really difficult to apply. If the equities are balanced for Milwaukee, then they have to be balanced for everybody. If the equities favor Milwaukee because each dollar of expenditure for better sewage treatment cannot be shown to result in a specific amount of benefit to the lake, then those same equities favor every other point discharger to the lake.

I suppose there is a minimum level below which a discharge would be de minimis, even though, as a matter of pure logic, all discharges form part of the whole. But we are not dealing with a de minimis situation here. We are not dealing with a level so low that the theory of liability is stretched to its logical extreme.

I find from what I believe is clear and convincing evidence that the defendants' sewage discharges into Lake Michigan are presently contributing in a substantial way to the accelerated eutrophication of the in-shore zone of the western shore of Lake Michigan, including waters of Lake Michigan which are within the territorial boundaries of the State of Illinois.

I find further, on the basis of clear and convincing evidence, that due to the interchange of waters in the in-shore and off-shore zones, the defendants' discharges, if continued at anything like present levels, will substantially contribute to the accelerated eutrophication of Lake

Michigan as a whole, including waters within the territorial boundaries of the States of Illinois and Michigan.

While it might be argued that the deleterious impact of eutrophication is of a far lesser magnitude than the danger presented by pathogens in the water, I believe that the results of eutrophication are serious enough to be an enjoinable nuisance. This is especially true when the countervailing right that is asserted is the right to discharge sewage, and sometimes raw sewage, into Lake Michigan.

I would like to discuss the defendants' argument that the Illinois discharges into Lake Michigan are somehow a defense to the defendants. First of all, it is a fact that most point sources in Illinois are now out of Lake Michigan. To say that the once-a-year discharge that is contemplated by the Waukegan plant of the North Shore Sanitary District is to be considered in the same light as Milwaukee's discharge of 320 million gallons a day, plus overflows, is not, I think, a valid argument.

The defendants cite the cases of *Missouri v. Illinois*, 200 US 496 (1906), and *New York v. New Jersey*, 256 U.S. 296 (1921). Neither of those cases is applicable to the facts we have here. In both of those cases, the evidence showed that the pollution of which plaintiff was complaining already existed by virtue of plaintiff's own activities. The waters which it was seeking to protect were already so polluted by its own discharge that it could truly be said that any activity of the defendants would not add materially to the condition.

In the case of *New York v. New Jersey*, New York was discharging raw sewage from its entire population into New York Bay, a badly polluted body of water, and it was seeking to enjoin the discharge of primary effluent, which had at least received primary treatment, by the State of New Jersey into the same bay. Clearly, that situation is distinguishable from this one where we are dealing with a body of water that is still relatively clean, despite what I have said about the accelerated eutrophica-

tion existing in the in-shore and off-shore zones. Further degradation is not only a possibility in this case, it is a certainty unless the defendants' discharges are terminated.

Furthermore, this is a nuisance case. Contributory negligence is not involved. Negligence is not involved.

Illinois does discharge effluents to other water courses. We are not dealing with those other water courses. We are dealing with Lake Michigan, and if pollution of the Illinois River and the Mississippi River results from the discharges of Illinois effluent, that is not material to a disposition of this cause dealing with an altogether different body of water. In addition, I note that the discharges which have been referred to primarily in this connection are those of the Metropolitan Sanitary District and the North Shore Sanitary District. These effluents have received advanced treatment, and they are being discharged into water courses which may, for all I know, have different qualities as receiving bodies than does Lake Michigan.

But in any event, I find no conduct on the part of the State of Illinois or the State of Michigan that would in any way estop these plaintiffs from the relief they are seeking against the defendants.

For the foregoing reasons, the court finds the issues on the question of liability in favor of the plaintiffs and against the defendants on all three counts of the complaint.

On the matter of the remedy, the situation has to be analyzed in terms of wet weather flows and dry weather flows, or rather in terms of wet weather flows and all flows.

As far as the wet weather flows are concerned, the witnesses for both sides were in agreement that overflows of raw sewage to Lake Michigan cannot be tolerated and must cease. I find that to be the fact. Whether the defendants agree to it or not, the discharge of raw sewage into the lake must cease.

The defendants have been studying the problem for a long time. I believe that there is little, if any, need for further study on the general proposition of what approach should be taken to the elimination of the overflows. I believe that there has been unnecessary delay on the part of the defendants in addressing the matter of eliminating the overflows, in the combined system, the separate system, the separate municipal areas, and the Metropolitan Interceptor System.

I read much of the material in the Combined Sewer Overflow study, and I find in it no express commitment to the elimination of the overflows. What I find is reference to "control" of the overflows and "reduction" of overflows. It is not altogether clear to me that the Combined Sewer study starts with the proposition that the overflows must be eliminated.

I can save a lot of time, and I am going to save a lot of time in the event any further study of that issues is contemplated, because it will be and it is the ruling of this court that all overflows shall be eliminated.

As far as the method is concerned, I am not going to get into the sanitary engineering business yet, and I hope that I will never have to. From the evidence that I have heard, it seems to me the sensible thing to do is to collect, transport, and treat. The alternatives that are discussed seemed to me alternatives which long since should have been discarded as impracticable, and I truly wonder what purpose is served by any further temporizing about end of the pipe treatment or satellite treatment or any of the various possibilities that have been the subject of discussion.

It is time now for adoption of a particular method that will result in the elimination of these overflows. I believe that faced with the necessity for doing that, Dr. Katz can get the job done. I will say that he has from the outset of this case impressed me as a person who is knowledgeable and sincere, and I believe that he can do it if he is given the cooperation he is going to need.

If the decision is to transport and treat, the defendants are either going to have to build some additional treatment facilities on a rather large scale, or they are going to have to build some detention facilities. From the evidence I have heard, it appears to me that the latter is the less expensive and more practicable alternative; but again, I am not going to order any particular method to be employed at this time. I am interested in results. The methods are a matter of design.

Now, turning from the matter of the discharge of raw sewage to the matter of treatment of all flows, including present dry weather flows and those wet weather flows which will in the future be collected and treated, I do not have the slightest doubt, on the basis of the evidence I have heard here, that for the protection of the interests asserted by the plaintiffs here and to effectuate the decision of this court, advanced waste treatment is necessary. That treatment must consist of coagulation and filtration — not carbon filtration, but sand or multi-media filtration, as the design may dictate. The effluent standards that should be sought are 5 milligrams per liter of BOD and 5 milligrams per liter of suspended solids. Phosphorus of less than 1 milligram per liter should be sought, and I believe will be an inevitable consequence of the installation of the type of advanced treatment which is being ordered.

I am not going to enter any order today on the question of averages. I do not think I have enough information to make a definitive statement on it. The considerations involved in the two kinds of injury we have been discussing here are, of course, different. The public health aspect of the case really requires that there be no input into the lake of an effluent which has not been effectively chlorinated, and, therefore, I can tell you now that any geometric average is out. It is going to have to be an arithmetic average, but of what dimensions, I am not sure, and I will not attempt to say now.

On the eutrophication questions, on the other hand, an average would not hurt because it does not make any dif-



ference whether the pounds go in today or next week. If you have a limit of so many pounds a month, that will get the job done. But the people of Illinois can be infected with viruses that result from one day or one hour of inadequate chlorination. The fact that there are no viruses on the other six days of the week reduces the exposure obviously, but it does not eliminate it to the extent it is possible to do so. And I believe that to the extent it is possible to do so, the law requires elimination of the hazard.

As far as the averages are concerned, I have the impression from Mr. Culp's testimony that the problem may take care of itself. He felt that Mr. Gupta's effluent standards really did not correlate very well with the treatment modes he was cost estimating, and it may be that the design the defendants come up with will, as in the case of Lake Tahoe, be sufficient to get effluent standards even below the 5 and 5 with no really remarkable peaks.

I have considered the possibility of appointing an engineer to work with the defendants. I believe I will not do that today. I am hopeful that the defendants will comply with the terms of this order without the necessity of any close supervision by this court. The extent to which they do so will be a matter of their good faith and their desire to conform.

As I had the pleasure of saying the other day, the counsel that have represented both sides in this case have been truly outstanding. If they continue during the time that lies ahead as they have in the past, I think that they can work out the details that are going to be necessary to put into effect the terms of this order within a reasonable time.

I will say that I believe time is a matter of importance. I will countenance no undue delay. On the other hand, I will be reasonable. I will not be oppressive. But the defendants must realize that they have a job to do and they must get about it.

I realize, too, that there will be an appeal in this case, and we will have to discuss the matter of a stay of execution at such time as that question arises.

The terms of this order are binding upon the defendants whether or not federal financial assistance becomes available. I hope that federal assistance is made available, but if it is not, the program decreed by this order must proceed nonetheless.

This brings us to the matter of cost, as to which there has been considerable controversy in this case. I think we should break it down into two things, because it is easy to get carried away by the huge numbers that have been bruited about. In my view, the cost of eliminating the overflows is not really a factor here. It is a cost that this order will undoubtedly cause to be incurred long before it would have been incurred, but the cost of eliminating those overflows would have had to have been borne by the City in any event at some time, unless, of course, it intended to ignore the opinions of its own expert witnesses to the effect that overflows are undesirable and must be eliminated. So whatever it costs to eliminate the overflows is not attributable to this lawsuit, except that this lawsuit has provided a catalyst for that expenditure.

Now, as to what is going to be involved in the cost of advanced waste treatment, I regard Mr. Gupta's figures, to the extent that they differ from those of Mr. Culp, as being wholly unfounded and speculative. When all is said and done, and when one finishes talking about the millions and tens of millions, it appears from Mr. Culp's testimony, and indeed from the testimony of the defendants' witness, Heaps, that what we are talking about here is something on the order of \$2 a month per household in the District. Now, I do not mean to say that \$2 per month per household is an insignificant or insubstantial amount, but what I do suggest is that it is in those terms that this obligation should be measured rather than in the forbidding and ominous numbers with the long trains of zeroes at the end.

The defendants argue, again sincerely, that this is a matter of priorities and they have questions of how much they are going to spend on their police department and how much they are going to spend on their fire department, how much for schools, and that this is a matter of ordering priorities. I agree that matters involving schools, fire protection, police protection, public libraries, are perhaps matters for the people of Milwaukee and Milwaukee County to decide for themselves according to their own values and structure of priorities, because those are local matters. Any wrong decision will have a local impact only.

Here, however, we are dealing with activities that affect not simply the people who reside in Milwaukee County, but rather affect a body of water which those people share with residents of other states. And while Milwaukee has the right to order its own priorities and the right to decide its own values, it does not have the right to order the priorities of the residents of other states or to dictate to them what their values ought to be.

Now, I will hear from counsel on the question of when the timetable should be submitted. I have no idea how long it should take to prepare such a timetable.

What do you suggest, Mr. Moerke?

MR. MOERKE: Does the Court contemplate that timetable will be prior to September 9th?

THE COURT: Yes.

MR. MOERKE: I would assume that.

THE COURT: Yes, because the timetable will be incorporated in the judgment order by reference if not actual physical incorporation.

MR. MOERKE: If the Court please, I really have no reaction to that at this moment.

THE COURT: I did not know whether you would or not. I do not know either.

MR. MOERKE: I think I should consult with my clients.

THE COURT: All right. Mr. Karaganis, do you have any suggestion?

MR. KARAGANIS: I would suggest that Mr. Moerke be given an opportunity to consult with his experts, and we will be glad to sit down with Mr. Moerke and work it out.

THE COURT: Let's do this. Let's have the two things coincide. Have the timetable or your explanations as to why you have been unable to devise one by September 9th.

MR. MOERKE: All right.

THE COURT: We will enter the judgment order on that date and make any decision in regard to the timetable at the same time.

MR. MOERKE: If the Court please—

THE COURT: Yes, Mr. Moerke?

MR. MOERKE: Would the Court contemplate any time for possible motions that might be made by the defendants?

THE COURT: You are certainly entitled to make motions, Mr. Moerke. I would not want you to take any time to rehash what we have just spent —

MR. MOERKE: I understand.

THE COURT: — a long time doing, and I don't think in a bench trial, to preserve your record, you need to make a post-trial motion. I don't want any such motion to delay moving ahead with the case, but if you have any kind of motion you want to make, make it within the same time.

File it sometime before the 9th of September, and I will rule on that at the same time I rule on the judgment.

MR. MOERKE: All right, fine. Thank you.

(Which were all the proceedings had on the day and date aforesaid.)

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## APPENDIX Q

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

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No. 72 C 1253

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PEOPLE OF THE STATE OF ILLINOIS,  
ex rel. WILLIAM J. SCOTT, Attorney General  
of the State of Illinois, *Plaintiff*,

PEOPLE OF THE STATE OF MICHIGAN,  
*Intervening Plaintiff*,

*v.*

CITY OF MILWAUKEE, WISCONSIN,  
et al., *Defendants*.

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November 1, 1973

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### MEMORANDUM OPINION AND ORDER

BAUER, District Judge.

This cause comes on the motion of the defendants City of Milwaukee, the Sewage Commission of the City of Milwaukee, the Metropolitan Sewage Commission of the County of Milwaukee, and the City of South Milwaukee to dismiss the complaint pursuant to Rule 12(b) of the Federal Rules of Civil Procedure.

The plaintiff, the People of the State of Illinois, consists of the more than 11 million residents of Illinois, a



sovereign state of the United States of America. Plaintiff alleges that it has a vital concern with matters of environmental quality affecting its air, land and water and in this regard has enacted comprehensive environmental legislation (the Illinois Environmental Protection Act of 1970, Ill.Rev.Stat.1971, Ch. 111½, §1001 et seq.), which legislation includes concern over pollution of the water of the State of Illinois, whether such pollution occurs as a result of discharges within or outside of Illinois. The People of the State of Michigan join in this action as an intervening plaintiff.

The defendants, City of Milwaukee, City of Kenosha, City of Racine, City of South Milwaukee are municipalities incorporated under the laws of the State of Wisconsin, political subdivisions thereof, and hence citizens of that State; the defendant Sewage Commission of the City of Milwaukee is charged by law with the duty of collecting, transmitting and disposing of the City's sewage; while the defendant Metropolitan Sewage Commission of the County of Milwaukee has the responsibility for the transmission, treatment, and disposal of sewage from territory located within its drainage area.

The plaintiff in the complaint alleges that the People of the State of Illinois are being injured by the defendant's practice of depositing raw sewage in Lake Michigan thereby causing pollution of Illinois' territorial waters of Lake Michigan. The plaintiff seeks an injunction against defendants prohibiting the complained of practice. This action is based on a federal question and diversity of citizenship jurisdiction pursuant to §§1331(a) and 1332. The plaintiff, in its complaint, alleges an action based on: (1) federal common law nuisance involving interstate waters; (2) violations of the Illinois Environmental Protection Act, Ch. 111½, Ill.Rev.Stat. §1001; and (3) state common law nuisance. The Supreme Court of the United States has previously declined to exercise jurisdiction in this cause, holding that pollution of interstate or navigable water could be abated under a federal common law claim based on nuisance and that such action was one "arising under" the laws of the United States within the meaning of 28 U.S.C. §1331(a).

and within the jurisdiction of the federal district courts. *Illinois v. Milwaukee*, 406 U.S. 91, 92 S.Ct. 1385, 31 L.Ed. 2d 712 (1972).

The defendants, in support of their instant motion, contend that the federal common law nuisance action has been preempted by the Federal Water Pollution Control Act, 33 U.S.C. §1151 et seq., as amended by P.L. 92-500, October 18, 1972. The plaintiff in opposition to the instant motion contends that the instant cause of action has not been preempted by the 1972 amendments to the Federal Water Pollution Control Act (Water Pollution Prevention and Control Act of 1972, 33 U.S.C. §1251, et seq., P.L. 92-500).

It is the opinion of this Court that the defendants' motion is without merit.

I. THE FEDERAL WATER POLLUTION CONTROL ACT, 33 U.S.C. §1151, et seq., AS AMENDED BY P.L. 92-500, OCTOBER 18, 1972 DOES NOT PREEMPT THE STATE OF ILLINOIS' RIGHT TO SEEK ABATEMENT IN FEDERAL DISTRICT COURT OF A FEDERAL COMMON LAW NUISANCE IN INTERSTATE OR NAVIGABLE WATERS.

A. *Pre-1972 Amendments*

To properly understand the historical development of the 1972 amendments to the Federal Water Pollution Control Act, one must first examine the status of the law as it existed prior to those amendments. Prior to the 1972 amendments, the Supreme Court and other courts repeatedly rejected the contention that the Federal Water Pollution Control Act preempted the right of states to seek common law nuisance relief from water pollution in state or federal courts. This consistent rejection was made in response to the specific argument that the Federal Water Pollution Control Act was a congressional attempt to create a comprehensive and uniform federal control program. See *Illinois v. Milwaukee*, *supra*; *Ohio v. Wyandotte Chemical Company*, 401 U.S. 49, 91 S.Ct. 1005, 28 L.Ed.2d 256 (1971); *United States v. Bushey*, 346 F.Supp. 145 (D.C.Vt.1972).

The application of federal common law to abate a public nuisance in interstate or navigable waters is not inconsistent with the Federal Water Pollution Control Act. *Illinois v. Milwaukee*, *supra*. The federal scheme is not preemptive of state action. Section 1(b) of the Federal Water Pollution Control Act declares that the policy of Congress is to recognize, preserve, and protect the primary responsibilities and rights of the states in preventing and controlling water pollution, 33 U.S.C. §1151(b) (1970 ed.). Section 10 of that act provides that except where the Attorney General has actually obtained a court order of pollution abatement on behalf of the United States, "State and interstate action to abate pollution of . . . navigable waters . . . shall not, . . . be displaced by Federal enforcement action," 33 U.S.C. §1160(b) (1970 ed.). The Environmental Quality Improvement Act of 1970, 84 Stat. 114, 42 U.S.C. §4371 (1970 ed.), while stating the general policy of Congress is protecting the environment, also states: "the primary responsibility for implementing this policy rests with State and local governments." 42 U.S.C. §4371(b)(2) (1970 ed.). Under federal law in 1970, states did indeed have primary responsibility for setting water quality standards; the federal agencies only set water quality standards for a state if the state defaulted. 33 U.S.C. §1160(c) (1970 ed.).

Where Congress specifically intends that its exercise of statutory powers should preempt all other remedies it has expressly so stated that it is preempting such remedies. For example, 33 U.S.C. §1163(f) expressly prohibits action beyond the terms of the Federal Water Pollution Control Act with respect to the regulation of marine sanitation devices. In contrast, other sections of the Federal Water Pollution Control Act, e.g. 33 U.S.C. §§1151(b), 1151(c), indicate that much residual authority was left apart from the provisions of the Federal Water Pollution Control Act.<sup>1</sup>

<sup>1</sup> Similarly, the Supreme Court, in construing the Clean Air Act, 42 U.S.C. §1857, et seq., had held that statutory preemption only

(Footnote continued on following page)

### B. *The 1972 Amendments*

An analysis of the 1972 amendments of the Federal Water Pollution Control Act clearly shows that Congress in no way intended to destroy any remedies available to the states prior to the passage of the 1972 amendments. Thus, in §101(b), the Congress adopts a statement very similar to that which previously existed in 33 U.S.C. §1151(b):

“It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of the State to prevent, reduce and eliminate pollution.”

In addition, the 1972 amendments adopted a provision similar to 33 U.S.C. §1151(c). Specifically §510 of the 1972 amendments states:

“Except as expressly provided in this chapter nothing . . . shall . . . (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.”

Nowhere do the 1972 amendments express any intention of eliminating the rights of the states to seek common law nuisance protection either in the state or federal courts, as enunciated in *Ohio v. Wyandotte Chemical Co.*, *supra*, and *Illinois v. Milwaukee*, *supra*.

Moreover, Congress was very explicit in the 1972 amendments where it intended to preempt state authority and to make the statutory structure of the amendments the exclusive remedial scheme. Thus, Section 312(f)(1) of the 1972 amendments expressly prohibits any state action with regard to the regulation of marine sanitation devices. If Congress had intended to preempt the common law rights of the states under the *Milwaukee* doctrine,

<sup>1</sup> *continued*

exists where Congress has explicitly so stated; and that non-statutory remedies such as federal common law nuisances exist where there has been no express preemption. See *Washington v. General Motors Corp.*, 406 U.S. 109, 92 S.Ct. 1396, 31 L.Ed.2d 727 (1972).

it surely would have expressly stated such intent in the act and would not have utilized the language contained in Section 101(b) and Section 510(2). Further, it is well settled that statutes will not be construed in derogation of common law unless such intent is clear from the words of the statute. *Isbrandtsen v. Johnson*, 343 U.S. 779, 72 S.Ct. 1011, 96 L.Ed. 1294 (1952). It is clear that the 1972 amendments to the Federal Water Pollution Control Act did not and were not intended to preempt actions based on federal common law nuisances.

## II. REGULATIONS PROMULGATED BY THE ENVIRONMENTAL PROTECTION AGENCY DO NOT DEMONSTRATE THE PREEMPTION OF ANY FEDERAL COMMON LAW RIGHT.

The defendants contend that the promulgation of two recent regulations, namely 40 C.F.R. 125 and 40 C.F.R. 130, by the Environmental Protection Agency preempts the federal common law right to bring a nuisance action for the pollution of interstate waters. More specifically, the defendants contend that at the time *Milwaukee* doctrine was predicated there were no existing standards or regulations capable of preempting federal common law action; however, the recent promulgation by the Environmental Protection Agency of two regulations now set up a uniform federal law which preempts federal common law rights.

Contrary to the defendants' contention, detailed and complex regulations governing water quality and waste discharges and permits existed under the pre-1972 Federal Water Pollution Control Act, 33 U.S.C. §1151, et seq.<sup>2</sup>

Despite the existence of these regulations and the statutory provisions of the pre-1972 Federal Water Pollution Control Act, the United States Supreme Court held

<sup>2</sup> See, e.g., the Joint Permit Program of the U.S. Environmental Protection Agency and the Army Corps of Engineers, 36 F.R. 6564, et seq., April 1, 1971.



that these regulations and statutes did not preempt the common law nuisance action. *Illinois v. Milwaukee*, *supra* 406 U.S. at 103, 92 S.Ct. 1385.<sup>3</sup>

There is much concern over the fact that in spite of the arsenal of federal power little is being done about water pollution.<sup>4</sup> That, of course, is not the issue before this Court. However, it is clear that the central issue raised by the instant motion is whether state action is preempted by federal law and regulations, and thus whether the protection of interstate waters has been left solely to the federally enacted statutes and standards.

Given the express intention of Congress to allow the states to establish tougher standards of performance it would seem illogical to argue that Congress intended the states to be bound solely by federal standards. The purpose of the Federal Water Pollution Control Act and its 1972 amendments was not to preempt but to supplement and amplify any pre-existing remedies. *United States v. Bushey*, 363 F.Supp. 110 (D.Vt. August 21, 1973). Consequently, the defendants' instant motion should be denied.

Accordingly, it is hereby ordered that the defendants' motion to dismiss is denied.

<sup>3</sup> Similarly the defendants' view of the restrictions of §510 is inaccurate. While §510 prohibits the states from adopting less stringent or easier standards of performance, §510 was expressly intended to allow states to require more stringent or tougher standards of performance than required by the federal government. The House-Senate Conference Committee specifically states:

"Section 510 provides that States, political subdivisions, and interstate agencies retain the right to set more restrictive standards and limitations than those imposed under this Act."  
*"Joint Explanatory Statement of the Committee of Conference"*, 92-1326, 1972 U.S. Code Cong. and Admin. News, Vol. 11, p.3776 at 3825.

<sup>4</sup> See Polikoff, "The Interlake Affair," *Wash.Monthly*, Vol. 3, No. 1, p. 7 (Mar. 1971).

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## APPENDIX R

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

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No. 72 C 1253

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PEOPLE OF THE STATE OF ILLINOIS,  
ex rel. WILLIAM J. SCOTT, Attorney General  
of the State of Illinois, *Plaintiff*,

PEOPLE OF THE STATE OF MICHIGAN,  
*Intervening Plaintiff*,

*v.*

CITY OF MILWAUKEE, WISCONSIN,  
et al., *Defendants*.

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November 16, 1972

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### MEMORANDUM OPINION AND ORDER

BAUER, J.:

This cause comes on the motions of defendants City of Milwaukee and Sewage Commission of the City of Milwaukee and of defendant Metropolitan Sewage Commission of the County of Milwaukee to quash service of process and dismiss the action for lack of personal jurisdiction over these defendants and for improper venue.

Plaintiff, the State of Illinois ("Illinois"), charging that its residents are being injured by defendants' alleged practice of depositing raw sewage in Lake Michigan and of thereby causing pollution of Illinois' territorial waters of Lake Michigan, seeks an injunction against defendants prohibiting this practice. The action, founded upon both federal question and diversity jurisdiction, pursuant to 28 U.S.C. §§1331(a) and 1332, alleges (1) federal common law nuisance involving interstate waters, (2) violations of the Illinois Environmental Protection Act, 111½ Ill. Rev. Stat. §1001, and (3) state common law nuisance. The Supreme Court previously declined to exercise jurisdiction in this cause, stating that the action would lie in the appropriate federal district court, pursuant to 28 U.S.C. §1331(a), as a cause of action under the federal common law of nuisance since the dispute involved interstate waters.<sup>1</sup>

The principal grounds of the instant motions are those of personal jurisdiction and venue. Defendants contend (1) that, as municipal corporations, they are not susceptible to service of process from an out-of-state court and (2) that, since this action is not founded solely in diversity, under the provisions of 28 U.S.C. §1391(b) it should be brought only in the judicial district wherein all defendants reside.

With respect to this Court's jurisdiction over these defendants, the Court notes that personal service of process was effected pursuant to the Illinois long-arm statute, 110 Ill. Rev. Stat. §17. Not only is that statute applicable where diversity jurisdiction is alleged (here, in Counts II and III of the Complaint), but it has been held applicable also in cases involving federal question jurisdiction. See, e.g., *Metropolitan Sanitary District of Greater Chicago v. General Electric Co.*, 35 F.R.D. 131 (N.D. Ill. 1964).

The constitutional arguments raised by defendants in contesting the use of long-arm service in the instant case

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<sup>1</sup> *Illinois v. City of Milwaukee*, .... U.S. ...., 92 S.Ct. 1385 [4 ERC 1001] (April 24, 1972).

are readily overcome. The constitutionality of the Illinois statute has been upheld on the basis that due process requirements are met if defendants, having minimum contacts with the State, "incur obligations to those entitled to the State's protection." *Nelson v. Miller*, 11 Ill.2d 378, 389 (1957). Furthermore, when defendant can reasonably contemplate that his product will eventually reach the forum state where the injury occurred, he has established sufficient contacts with that state. *Gray v. American Radiator and Standard Sanitary Corp.*, 22 Ill.2d 432 (1961); *Anderson v. Penncraft Tool Co.*, 200 F.Supp. 145 (N.D. Ill. 1961). Since these defendants could reasonably contemplate that the sewage which they discharge would eventually reach Illinois territorial waters of Lake Michigan, which is the situs of the alleged injury to plaintiff, this Court holds that the service of process pursuant to the Illinois long-arm statute was valid.

Defendants attempt to buttress their arguments against personal jurisdiction of this Court through assertions that actions against them are inherently local in nature. However, it is clear that where the relief sought is injunctive and pertaining specifically to the named defendants, as here, the action is transitory. Thus, these defendants must be subject to personal jurisdiction of this Court.

The appropriate portion of the venue statute, 28 U.S.C. §1391(b) provides that:

A civil action wherein jurisdiction is not founded solely on diversity of citizenship may be brought only in the judicial district where all defendants reside, or in which the claim arose, except as otherwise provided by law.

Contesting the venue of this Court, defendants cite numerous cases for the proposition that the appropriate venue for this action is the district in which all defendants reside, the Eastern District of Wisconsin. However, all but one of these cases was decided prior to the enactment of the 1966 amendment to §1391(b), which added the words "or in which the claim arose"; thus, such authority need

not be considered. The remaining case, *Cole v. Trustees of Columbia University*, 300 F.Supp. 1026 (S.D. N.Y. 1969), was concerned primarily with overriding governmental policy in not subjecting Senate subcommittee members to suit in any federal district court in the county. Since this case cannot imply such far-reaching consequences, this Court is not bound by *Cole* in its determination of venue. Following the Supreme Court's observations in footnote 19 of its opinion in the instant case, *supra*, that this action may be brought only "in the judicial district where all defendants reside, or in which the claim arose," 28 U.S.C. §1391(b), thereby giving flexibility to the choice of venue," this Court concludes that venue in the United States District for the Northern District of Illinois is appropriate. The claim of plaintiff arose in the Northern District of Illinois, where the injury occurred. See *Gray v. American Radiator and Standard Sanitary Corp.*, *supra*.

Accordingly, it is hereby ordered that defendants' motions to quash service of process and to dismiss are denied.



## APPENDIX S

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### SUPREME COURT OF THE UNITED STATES

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ILLINOIS *v.* CITY OF MILWAUKEE,  
WISCONSIN, ET AL.

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ON MOTION FOR LEAVE TO FILE BILL OF COMPLAINT  
No. 49, Orig. Argued February 29, 1972—Decided April 24, 1972

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*Fred F. Herzog* argued the cause for plaintiff. With him on the briefs was *William J. Scott*, Attorney General of Illinois.

*Harry G. Slater* argued the cause for defendants. With him on the brief for defendant City of Milwaukee were *John J. Fleming* and *Richard F. Maruszewski*. *Michael S. Fisher* and *Burton A. Scott* filed a brief for defendant City of Kenosha. *Jack Harvey*, *Edward A. Krenzke*, and *Louis J. Roshar* filed a brief for defendant City of Racine. *Mr. Fleming* and *Harvey G. Odenbrett* filed a brief for defendant Sewerage Commission of the City of Milwaukee. *Ewald L. Moerke, Jr.*, filed a brief for defendant Metropolitan Sewerage Commission of the County of Milwaukee.

MR. JUSTICE DOUGLAS delivered the opinion of the Court.

This is a motion by Illinois to file a bill of complaint under our original jurisdiction against four cities of Wisconsin, the Sewerage Commission of the City of Milwaukee, and the Metropolitan Sewerage Commission of the

County of Milwaukee. The cause of action alleged is pollution by the defendants of Lake Michigan, a body of interstate water. According to plaintiff, some 200 million gallons of raw or inadequately treated sewage and other waste materials are discharged daily into the lake in the Milwaukee area alone. Plaintiff alleges that it and its subdivisions prohibit and prevent such discharges, but that the defendants do not take such actions. Plaintiff asks that we abate this public nuisance.

# I

Article III, § 2, cl. 2, of the Constitution provides: "In all Cases . . . in which a State shall be Party, the Supreme Court shall have original Jurisdiction." Congress has provided in 28 U. S. C. § 1251 that "(a) the Supreme Court shall have original and exclusive jurisdiction of: (1) All controversies between two or more States."

It has long been this Court's philosophy that "our original jurisdiction should be invoked sparingly." *Utah v. United States*, 394 U. S. 89, 95. We construe 28 U. S. C. § 1251 (a)(1), as we do Art. III, § 2, cl. 2, to honor our original jurisdiction but to make it obligatory only in appropriate cases. And the question of what is appropriate concerns, of course, the seriousness and dignity of the claim; yet beyond that it necessarily involves the availability of another forum where there is jurisdiction over the named parties, where the issues tendred may be litigated, and where appropriate relief may be had. We incline to a sparing use of our original jurisdiction so that our increasing duties with the appellate docket will not suffer. *Washington v. General Motors Corp.*, *post*, p. 109.

Illinois presses its request for leave to file saying that the agencies named as defendants are instrumentalities of Wisconsin and therefore that this is a suit against Wisconsin which could not be brought in any other forum.

Under our decisions there is no doubt that the actions of public entites might, under appropriate pleadings, be

attributed to a State so as to warrant a joinder of the State as party defendant.

In *Missouri v. Illinois*, 180 U. S. 208, Missouri invoked our original jurisdiction by an action against the State of Illinois and the Sanitary District of the City of Chicago, seeking an injunction to restrain the discharge of raw sewage into the Mississippi River. On a demurrer to the motion for leave to file a bill of complaint, Illinois argued that the Sanitary District was the proper defendant and that Illinois should not have been made a party. That argument was rejected:

"The contention . . . seems to be that, because the matters complained of in the bill proceed and will continue to proceed from the acts of the Sanitary District of Chicago, a corporation of the State of Illinois, it therefore follows that the State, as such, is not interested in the question, and is improperly made a party.

"We are unable to see the force of this suggestion. The bill does not allege that the Sanitary District is acting without or in excess of lawful authority. The averment and the conceded facts are that the corporation is an agency of the State to do the very things which, according to the theory of the complainant's case, will result in the mischief to be apprehended. It is state action and its results that are complained of—thus distinguishing this case from that of *Louisiana v. Texas* [176 U. S. 1], where the acts sought to be restrained were alleged to be those of officers or functionaries proceeding in a wrongful and malevolent misapplication of the quarantine laws of Texas. The Sanitary District of Chicago is not a private corporation, formed for purposes of private gain, but a public corporation, whose existence and operations are wholly within the control of the State.

"The object of the bill is to subject this public work to judicial supervision, upon the allegation that the method of its construction and maintenance will cre-

ate a continuing nuisance, dangerous to the health of a neighboring State and its inhabitants. Surely, in such a case, the State of Illinois would have a right to appear and traverse the allegations of the bill, and, having such a right, might properly be made a party defendant." 180 U. S., at 242.

In *New York v. New Jersey*, 256 U. S. 296, the State of New York brought an original action against the State of New Jersey and the Passaic Valley Sewerage Commissioners, seeking an injunction against the discharge of sewage into Upper New York Bay. The question was whether the actions of the sewage agency could be attributed to New Jersey so as to make that State responsible for them. The Court said:

"Also, for the purpose of showing the responsibility of the State of New Jersey for the proposed action of the defendant, the Passaic Valley Sewerage Commissioners, the bill sets out, with much detail, the acts of the legislature of that State authorizing and directing such action on their part.

"Of this it is sufficient to say that the averments of the bill, quite undenied, show that the defendant sewerage commissioners constitute such a statutory, corporate agency of the State that their action, actual or intended, must be treated as that of the State itself, and we shall so regard it." 256 U. S., at 302.

The most recent case is *New Jersey v. New York*, 345 U. S. 369. The action was originally brought by the State of New Jersey against the City and State of New York for injunctive relief against the diversion of waters from Delaware River tributaries lying within New York State. Pennsylvania was subsequently allowed to intervene. The question presented by this decision was the right of the City of Philadelphia also to intervene in the proceedings as a party plaintiff. The issues raised were broad:

"All of the present parties to the litigation have formally opposed the motion to intervene on grounds (1) that the intervention would permit a suit against

a state by a citizen of another state in contravention of the Eleventh Amendment; (2) that the Commonwealth of Pennsylvania has the exclusive right to represent the interest of Philadelphia as *parens patriae*; and (3) that intervention should be denied, in any event, as a matter of sound discretion." 345 U. S., at 372.

We denied the City of Philadelphia's motion to intervene, saying:

"The City of Philadelphia represents only a part of the citizens of Pennsylvania who reside in the watershed area of the Delaware River and its tributaries and depend upon those waters. If we undertook to evaluate all the separate interests within Pennsylvania, we could, in effect, be drawn into an intramural dispute over the distribution of water within the Commonwealth. . . .

"Our original jurisdiction should not be thus expanded to the dimensions of ordinary class actions. An intervenor whose state is already a party should have the burden of showing some compelling interest in his own right, apart from his interest in a class with all other citizens and creatures of the state, which interest is not properly represented by the state." 345 U. S., at 373.

We added:

"The presence of New York City in this litigation is urged as a reason for permitting Philadelphia to intervene. But the argument misconstrues New York City's position in the case. New York City was not admitted into this litigation as a matter of discretion at her request. She was forcibly joined as a defendant to the original action since she was the authorized agent for the execution of the sovereign policy which threatened injury to the citizens of New Jersey. Because of this position as a defendant, subordinate to the parent state as the primary defendant, New York City's position in the case raise no prob-



lems under the Eleventh Amendment." 345 U. S., at 374-375.

We conclude that while, under appropriate pleadings, Wisconsin could be joined as a defendant in the present controversy, it is not mandatory that it be made one.

It is well settled that for the purposes of diversity of citizenship, political subdivisions are citizens of their respective States.<sup>1</sup> *Bullard v. City of Cisco*, 290 U. S. 179; *Cowles v. Mercer County*, 7 Wall. 118, 122. If a political subdivision is a citizen for diversity purposes, then it would make no jurisdictional difference whether it was the plaintiff or defendant in such an action. That being the case, a political subdivision in one State would be able to bring an action founded upon diversity jurisdiction against a political subdivision of another State.

We therefore conclude that the term "States" as used in 28 U. S. C. § 1251 (a)(1) should not be read to include their political subdivisions. That, of course, does not mean that the political subdivisions of a State may not be sued under the head of our original jurisdiction, for 28 U. S. C. § 1251 provides that "(b) the Supreme Court shall have original but not exclusive jurisdiction of: (3) all actions or proceedings by a State against the citizens of another State . . . ."

If the named public entities of Wisconsin may, however, be sued by Illinois in a federal district court, our original jurisdiction is not mandatory.

It is to that aspect of the case that we now turn.

## II

Title 28 U. S. C. § 1331 (a) provides that "[t]he district courts shall have original jurisdiction of all civil actions

<sup>1</sup> It is equally well settled that a suit between a State and a citizen of another State is not a suit between citizens of different States for the purposes of diversity of citizenship jurisdiction. *Postal Telegraph Cable Co. v. Alabama*, 155 U. S. 482, 487.

wherein the matter in controversy exceeds the sum or value of \$10,000, exclusive of interest and costs, and arises under the Constitution, laws, or treaties of the United States.”

The considerable interests involved in the purity of interstate waters would seem to put beyond question the jurisdictional amount provided in § 1331 (a). See *Glenwood Light & Water Co. v. Mutual Light, Heat & Power Co.*, 239 U. S. 121; *Mississippi & Missouri R. Co. v. Ward*, 2 Black 485, 492; *Ronzio v. Denver & R. G. W. R. Co.*, 116 F. 2d 604, 606; C. Wright, *The Law of Federal Courts* 117-119 (2d ed. 1970); Note, 73 Harv. L. Rev. 1369. The question is whether pollution of interstate or navigable waters creates actions arising under the “laws” of the United States within the meaning of § 1331 (a). We hold that it does; and we also hold that § 1331 (a) includes suits brought by a State.

MR. JUSTICE BRENNAN, speaking for the four members of this Court in *Romero v. International Terminal Operating Co.*, 358 U. S. 354, 393 (dissenting and concurring), who reached the issue, concluded that “laws,” within the meaning of § 1331 (a), embraced claims founded on federal common law:

“The contention cannot be accepted that since petitioner’s rights are judicially defined, they are not created by ‘the laws . . . of the United States’ within the meaning of § 1331 . . . . In another context, that of state law, this Court has recognized that the statutory word ‘laws’ includes court decisions. The converse situation is presented here in that federal courts have an extensive responsibility of fashioning rules of substantive law . . . . These rules are as fully ‘laws’ of the United States as if they had been enacted by Congress.” (Citations omitted.)

Lower courts have reached the same conclusion. See, e.g., *Murphy v. Colonial Federal Savings & Loan Assn.*, 388 F. 2d 609, 611-612 (CA2 1967); *Stokes v. Adair*, 265 F. 2d 662 (CA4 1959); *Mater v. Holley*, 200 F. 2d 123 (CA5

1952); American Law Institute, Study of the Division of Jurisdiction Between State and Federal Courts 180-182 (1969).

Judge Harvey M. Johnsen in *Texas v. Pankey*, 441 F. 2d 236, 240, stated the controlling principle:

"As the field of federal common law has been given necessary expansion into matters of federal concern and relationship (where no applicable federal statute exists, as there does not here), the ecological rights of a State in the improper impairment of them from sources outside the State's own territory, now would and should, we think, be held to be a matter having basis and standard in federal common law and so directly constituting a question arising under the laws of the United States."

Chief Judge Lumbard, speaking for the panel in *Ivy Broadcasting Co. v. American Tel. & Tel. Co.*, 391 F. 2d 486, 492, expressed the same view as follows:

"We believe that a cause of action similarly 'arises under' federal law if the dispositive issues stated in the complaint require the application of federal common law . . . . The word 'laws' in § 1331 should be construed to include laws created by federal judicial decisions as well as by congressional legislation. The rationale of the 1875 grant of federal question jurisdiction—to insure the availability of a forum designed to minimize the danger of hostility toward, and specially suited to the vindication of, federally created rights—is as applicable to judicially created rights as to rights created by statute." (Citations omitted.)

We see no reason not to give "laws" its natural meaning, see *Romero v. International Terminal Operating Co.*, *supra*, at 393 n. 5 (BRENNAN, J., dissenting and concurring), and therefore conclude that § 1331 jurisdiction will support claims founded upon federal common law as well as those of a statutory origin.

As respects the power of a State to bring an action under § 1331 (a), *Ames v. Kansas*, 111 U. S. 449, 470-472, is controlling. There Kansas had sued a number of corporations in its own courts and, since federal rights were involved, the defendants had the cases removed to the federal court. Kansas resisted, saying that the federal court lacked jurisdiction because of Art. III, § 2, cl. 2, of the Constitution, which gives this Court "original Jurisdiction" in "all Cases . . . in which a State shall be Party." The Court held that where a State is suing parties who are not other States, the original jurisdiction of this Court is not exclusive (*id.*, at 470) and that those suits "may now be brought in or removed to the Circuit Courts [now the District Courts] without regard to the character of the parties."<sup>2</sup> *Ibid.* We adhere to that ruling.

### III

Congress has enacted numerous laws touching interstate waters. In 1899 it established some surveillance by the Army Corps of Engineers over industrial pollution, not including sewage, Rivers and Harbors Act of March 3, 1899, 30 Stat. 1121, a grant of power which we construed in *United States v. Republic Steel Corp.*, 362 U. S. 482, and in *United States v. Standard Oil Co.*, 384 U. S. 224.

The 1899 Act has been reinforced and broadened by a complex of laws recently enacted. The Federal Water Pollution Control Act, 62 Stat. 1155, as amended, 33 U. S. C. § 1151, tightens control over discharges into navigable waters so as not to lower applicable water quality standards. By the National Environmental Policy Act of 1969, 83 Stat. 852, 42 U. S. C. § 4321 *et seq.*, Congress "authorizes and directs" that "the policies, regulations,

<sup>2</sup> See also H. R. Rep. No. 308, 80th Cong., 1st Sess., A 104 (1947): "The original jurisdiction conferred on the Supreme Court by Article 3, section 2, of the Constitution is not exclusive by virtue of that provision alone. Congress may provide for or deny exclusiveness."

and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act" and that "all agencies of the Federal Government shall . . . identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." Sec. 102, 42 U. S. C. § 4332. Congress has evinced increasing concerns with the quality of the aquatic environment as it affects the conservation and safeguarding of fish and wildlife resources. See, *e.g.*, Fish and Wildlife Act of 1956, 70 Stat. 1119, 16 U. S. C. § 742a; the Act of Sept. 22, 1959, 73 Stat. 642, authorizing research in migratory marine game fish, 16 U. S. C. § 760e; and the Fish and Wildlife Coordination Act, 48 Stat. 401, as amended, 16 U. S. C. § 661.

Buttressed by these new and expanding policies, the Corps of Engineers has issued new Rules and Regulations governing permits for discharges or deposits into navigable waters. 36 Fed. Reg. 6564 *et seq.*

The Federal Water Pollution Control Act in § 1 (b) declares that it is federal policy "to recognize, preserve, and protect the primary responsibilities and rights of the States in preventing and controlling water pollution." But the Act makes clear that it is federal, not state, law that in the end controls the pollution of interstate or navigable waters.<sup>3</sup> While the States are given time to establish water quality standards, § 10 (c)(1), if a State fails to do so the federal administrator<sup>4</sup> promulgates one. § 10 (c)(2).

<sup>3</sup> The contrary indication in *Ohio v. Wyandotte Chemical Corp.*, 401 U. S. 493, 498 n. 3, was based on the preoccupation of that litigation with public nuisance under Ohio law, not the federal common law which we now hold is ample basis for federal jurisdiction under 28 U. S. C. § 1331 (a).

<sup>4</sup> The powers granted the Secretary of the Interior under the Federal Water Quality Act of 1965, 79 Stat. 903, were assigned by the President to the Administrator of the Environmental Protection Agency pursuant to Reorganization Plan No. 3 of 1970. See 35 Fed. Reg. 15623.



Section 10 (a) makes pollution of interstate or navigable waters subject "to abatement" when it "endangers the health or welfare of any persons." The abatement that is authorized follows a long-drawn-out procedure unnecessary to relate here. It uses the conference procedure, hoping for amicable settlements. But if none is reached, the federal administrator may request the Attorney General to bring suit on behalf of the United States for abatement of the pollution. § 10 (g).

The remedy sought by Illinois is not within the precise scope of remedies prescribed by Congress. Yet the remedies which Congress provides are not necessarily the only federal remedies available. "It is not uncommon for federal courts to fashion federal law where federal rights are concerned." *Textile Workers v. Lincoln Mills*, 353 U. S. 448, 457. When we deal with air and water in their ambient or interstate aspects, there is a federal common law,<sup>5</sup> as *Texas v. Pankey*, 441 F. 2d 236, recently held.

<sup>5</sup> While the various federal environmental protection statutes will not necessarily mark the outer bounds of the federal common law, they may provide useful guidelines in fashioning such rules of decision. What we said in another connection in *Textile Workers v. Lincoln Mills*, 353 U. S. 448, 456-457, is relevant here:

"The question then is, what is the substantive law to be applied in suits under § 301 (a)? We conclude that the substantive law to apply in suits under § 301 (a) is federal law, which the courts must fashion from the policy of our national labor laws. The Labor Management Relations Act expressly furnishes some substantive law. It points out what the parties may or may not do in certain situations. Other problems will lie in the penumbra of express statutory mandates. Some will lack express statutory sanction but will be solved by looking at the policy of the legislation and fashioning a remedy that will effectuate that policy. The range of judicial inventiveness will be determined by the nature of the problem. Federal interpretation of the federal law will govern, not state law. But state law, if compatible with the purpose of § 301, may be resorted to in order to find the rule that will best effectuate the federal policy. Any state law applied, however, will be absorbed as federal law and will not be an independent source of private rights." (Citations omitted.) See also Woods & Reed, *The Supreme Court and Interstate Environmental Quality: Some Notes on the Wyandotte Case*, 12 Ariz. L. Rev. 691, 713-714; Note, 56 Va. L. Rev. 458.

The application of federal common law to abate a public nuisance in interstate or navigable waters is not inconsistent with the Water Pollution Control Act. Congress provided in § 10 (b) of that Act that, save as a court may decree otherwise in an enforcement action, "[s]tate and interstate action to abate pollution of interstate or navigable waters shall be encouraged and shall not . . . be displaced by Federal enforcement action."

The leading air case is *Georgia v. Tennessee Copper Co.*, 206 U. S. 230, where Georgia filed an original suit in this Court against a Tennessee company whose noxious gases were causing a wholesale destruction of forests, orchards, and crops in Georgia. The Court said:

"The caution with which demands of this sort, on the part of a State, for relief from injuries analogous to torts, must be examined, is dwelt upon in *Missouri v. Illinois*, 200 U. S. 496, 520, 521. But it is plain that some such demands must be recognized, if the grounds alleged are proved. When the States by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining *quasi*-sovereign interests; and the alternative to force is a suit in this court. *Missouri v. Illinois*, 180 U. S. 208, 241." 206 U. S., at 237.

The nature of the nuisance was described as follows:

"It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source. If any such demand is to be enforced this must be, notwithstanding the

hesitation that we might feel if the suit were between private parties, and the doubt whether for the injuries which they might be suffering to their property they should not be left to an action as law." *Id.*, at 238.

Our decisions concerning interstate waters contain the same theme. Rights in interstate streams, like questions of boundaries, "have been recognized as presenting federal question."<sup>6</sup> *Hinderlider v. La Plata Co.*, 304 U. S. 92, 110. The question of apportionment of interstate waters is a question of "federal common law" upon which state statutes or decisions are not conclusive.<sup>7</sup> *Ibid.*

In speaking of the problem of apportioning the waters of an interstate stream, the Court said in *Kansas v. Colorado*, 206 U. S. 46, 98, that "through these successive disputes and decisions this court is practically building up what may not improperly be called interstate common law." And see *Texas v. New Jersey*, 379 U. S. 674 (escheat of intangible personal property), *Texas v. Florida*, 306 U. S. 398, 405 (suit by bill in the nature of interpleader

<sup>6</sup> Thus, it is not only the character of the parties that requires us to apply federal law. See *Georgia v. Tennessee Copper Co.*, 206 U. S. 230, 237; cf. *Wisconsin v. Pelican Ins. Co.*, 127 U. S. 265, 289; The Federalist No. 80 (A. Hamilton). As Mr. Justice Harlan indicated for the Court in *Banco Nacional de Cuba v. Sabbatino*, 376 U. S. 398, 421-427, where there is an overriding federal interest in the need for a uniform rule of decision or where the controversy touches basic interests of federalism, we have fashioned federal common law. See also *Clearfield Trust Co. v. United States*, 318 U. S. 363; *D'Oench, Duhme & Co. v. Federal Deposit Ins. Corp.*, 315 U. S. 447; C. Wright, *The Law of Federal Courts* 249 (2d ed. 1970); Woods & Reed, *supra*, n. 5, at 703-713; Note, 50 Texas L. Rev. 183. Certainly these same demands for applying federal law are present in the pollution of a body of water such as Lake Michigan bounded, as it is, by four States.

<sup>7</sup> Those who maintain that state law governs overlook the fact that the *Hinderlider* case was written by Mr. Justice Brandeis who also wrote for the Court in *Erie R. Co. v. Tompkins*, 304 U. S. 64, the two cases being decided the same day.

to determine the true domicile of a decedent as the basis of death taxes).

Equitable apportionment of the waters of an interstate stream has often been made under the head of our original jurisdiction. *Nebraska v. Wyoming*, 325 U. S. 589; *Kansas v. Colorado, supra*; cf. *Arizona v. California*, 373 U. S. 546, 562. The applicable federal common law depends on the facts peculiar to the particular case.

"Priority of appropriation is the guiding principle. But physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former—these are all relevant factors. They are merely an illustrative, not an exhaustive catalogue. They indicate the nature of the problem of apportionment and the delicate adjustment of interests which must be made." 325 U. S., at 618.

When it comes to water pollution this Court has spoken in terms of "a public nuisance,"<sup>8</sup> *New York v. New Jersey*, 256 U. S., at 313; *New Jersey v. New York City*, 283 U. S. 473, 481, 482. In *Missouri v. Illinois*, 200 U. S. 496, 520-521, the Court said, "It may be imagined that a nuisance might be created by a State upon a navigable river

<sup>8</sup> In *North Dakota v. Minnesota*, 263 U. S. 365, 374, the Court said:

"[W]here one State, by a change in its method of draining water from lands within its border, increases the flow into an interstate stream, so that its natural capacity is greatly exceeded and the water is thrown upon the farms of another State, the latter State has such an interest as quasi-sovereign in the comfort, health and prosperity of its farm owners that resort may be had to this Court for relief. It is the creation of a public nuisance of simple type for which a State may properly ask an injunction."

like the Danube, which would amount to a *casus belli* for a State lower down, unless removed. If such a nuisance were created by a State upon the Mississippi the controversy would be resolved by the more peaceful means of a suit in this court."

It may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance. But until that comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance by water pollution. While a federal law governs,<sup>9</sup> consideration of state standards may be relevant. Cf. *Connecticut v. Massachusetts*, 282 U. S. 660, 670; *Kansas v. Colorado*, 185 U. S. 125, 146-147. Thus, a State with high water-quality standards may well ask that its strict standards be honored and that it not be compelled to lower itself to the more degrading standards of a neighbor. There are no fixed rules that govern; these will be equity suits in which the informed judgment of the chancellor will largely govern.

We deny, without prejudice, the motion for leave to file. While this original suit normally might be the appropriate vehicle for resolving this controversy, we exercise our dis-

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<sup>9</sup> "Federal common law and not the varying common law of the individual States is, we think, entitled and necessary to be recognized as a basis for dealing in uniform standard with the environmental rights of a State against improper impairment by sources outside its domain. The more would this seem to be imperative in the present era of growing concern on the part of a State about its ecological conditions and impairments of them. In the outside sources of such impairment, more conflicting disputes, increasing assertions and proliferating contentions would seem to be inevitable. Until the field has been made the subject of comprehensive legislation or authorized administrative standards, only a federal common law basis can provide an adequate means for dealing with such claims as alleged federal rights. And the logic and practicality of regarding such claims as being entitled to be asserted within the federal-question jurisdiction of § 1331 (a) would seem to be self-evident." *Texas v. Pankey*, 441 F. 2d 236, 241-242.



cretion to remit the parties to an appropriate district court<sup>10</sup> whose powers are adequate to resolve the issues.

*So ordered.*

<sup>10</sup> The rule of decision being federal, the "action . . . may be brought only in the judicial district where all defendants reside, or in which the claim arose," 28 U. S. C. § 1391 (b), thereby giving flexibility to the choice of venue. See also 28 U. S. C. § 1407.

Whatever may be a municipality's sovereign immunity in actions for damages, see Van Alstyne, Governmental Tort Liability: A Decade of Change, 1966 U. Ill. L. F. 919, 944-948; Note, 4 Suffolk L. Rev. 832 (1970), actions seeking injunctive relief stand on a different footing. The cases are virtually unanimous in holding that municipalities are subject to injunctions to abate nuisances. See cases collected in 17 E. McQuillin, The Law of Municipal Corporations § 49.51 *et seq.* (3d rev. ed. 1968). See also Wis. Stat. Ann. § 59.96 (6)(b) (1957) as respects the suability of metropolitan sewerage commissions.

While the kind of equitable relief to be accorded lies in the discretion of the chancellor (*Harrisonville v. Dickey Clay Mfg. Co.*, 289 U. S. 334), a State that causes a public nuisance is suable in this Court and any of its public entities is suable in a federal district court having jurisdiction:

"[I]t is generally held that a municipality, like a private individual, may be enjoined from maintaining a nuisance. Thus in a proper case a municipal corporation will be restrained by injunction from creating a nuisance on private property, as by the discharge of sewage or poisonous gases thereon, or, in some jurisdictions, by the obstruction of drainage of waters, or by discharging sewage or filth into a stream and polluting the water to the damage of lower riparian owners, or by dumping garbage or refuse, or by other acts. Likewise, a municipality may be enjoined from creating or operating a nuisance, whether the municipality is acting in a governmental or proprietary capacity, impairing property rights. And, if a nuisance is established causing irreparable injury for which there is no adequate remedy at law it may be enjoined irrespective of the resulting damage or injury to the municipality," 17 McQuillin, *supra*, § 49.55.

## APPENDIX T

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The pertinent provisions of the Clean Water Act, as amended, 33 U.S.C. §§ 1251 *et seq.*, are as follows:

### SUBCHAPTER I — RESEARCH AND RELATED PROGRAMS

#### §1251.[101\*] Congressional declaration of goals and policy

(a) The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter —

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

(3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;

(4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;

(5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State; and

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\* Section numbers from the Act itself are bracketed alongside section numbers from 33 U.S.C.

(6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans.

(b) It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter. It is the policy of Congress that the States manage the construction grant program under this chapter and implement the permit programs under sections 1342 and 1344 of this title. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

\* \* \*

#### **§1252.[102] Comprehensive programs for water pollution control**

##### **Preparation and development**

(a) The Administrator shall, after careful investigation, and in cooperation with other Federal agencies, State water pollution control agencies, interstate agencies, and the municipalities and industries involved, prepare or develop comprehensive programs for preventing, reducing, or eliminating the pollution of the navigable waters and ground waters and improving the sanitary condition of surface and underground waters. In the development of such comprehensive programs due regard shall be given to the improvements which are necessary to conserve such waters for the protection and propagation of fish and aquatic life and wildlife, recreational purposes, and the

withdrawal of such waters for public water supply, agricultural, industrial, and other purposes. For the purpose of this section, the Administrator is authorized to make joint investigations with any such agencies of the condition of any waters in any State or States, and of the discharges of any sewage, industrial wastes, or substance which may adversely affect such waters.

\* \* \*

**§1253.[103] Interstate cooperation and uniform laws**

(a) The Administrator shall encourage cooperative activities by the States for the prevention, reduction, and elimination of pollution, encourage the enactment of improved and, so far as practicable, uniform State laws relating to the prevention, reduction, and elimination of pollution; and encourage compacts between States for the prevention and control of pollution.

(b) The consent of the Congress is hereby given to two or more States to negotiate and enter into agreements or compacts, not in conflict with any law or treaty of the United States, for (1) cooperative effort and mutual assistance for the prevention and control of pollution and the enforcement of their respective laws relating thereto, and (2) the establishment of such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts. No such agreement or compact shall be binding or obligatory upon any State a party thereto unless and until it has been approved by the Congress.

\* \* \*

**§1254.[104] Research, investigations, training, and information**

**Establishment of national programs; cooperation; investigations; water quality surveillance system; reports**

(a) The Administrator shall establish national programs for the prevention, reduction, and elimination of pollution.

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### **Research and studies on harmful effects of pollutants; cooperation with Secretary of Health, Education, and Welfare**

(c) In carrying out the provisions of subsection (a) of this section the Administrator shall conduct research on, and survey the results of scientific studies on, the harmful effects on the health or welfare of persons caused by pollutants.

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### **Lake pollution**

(h) The Administrator is authorized to enter into contracts with, or make grants to, public or private agencies and organizations and individuals for (A) the purpose of developing and demonstrating new or improved methods for the prevention, removal, reduction, and elimination of pollution in lakes, including the undesirable effects of nutrients and vegetation, and (B) the construction of publicly owned research facilities for such purpose.

\* \* \*

### **§1255.[105] Grants for research and development**

**Demonstration projects covering storm waters, advanced waste treatment and water purification methods, and joint treatment systems for municipal and industrial wastes**

(a) The Administrator is authorized to conduct in the Environmental Protection Agency, and to make grants to any State, municipality, or intermunicipal or interstate agency for the purpose of assisting in the development of —

(1) any project which will demonstrate a new or improved method of preventing, reducing, and eliminating the discharge into any waters of pollutants from sewers which carry storm water or both storm water and pollutants; or

(2) any project which will demonstrate advanced waste treatment and water purification methods (including the temporary use of new or improved chemical



additives which provide substantial immediate improvement to existing treatment processes), or new or improved methods of joint treatment systems for municipal and industrial wastes;

and to include in such grants such amounts as are necessary for the purpose of reports, plans, and specifications in connection therewith.

\* \* \*

**Accelerated and priority development of waste management and waste treatment methods and identification and measurement methods**

(d) In carrying out the provisions of this section, the Administrator shall conduct, on a priority basis, an accelerated effort to develop, refine, and achieve practical application of:

(1) waste management methods applicable to point and nonpoint sources of pollutants to eliminate the discharge of pollutants, including, but not limited to, elimination of runoff of pollutants and the effects of pollutants from in-place or accumulated sources;

(2) advanced waste treatment methods applicable to point and nonpoint sources, including in-place or accumulated sources of pollutants, and methods for reclaiming and recycling water and confining pollutants so they will not migrate to cause water or other environmental pollution; and

(3) improved methods and procedures to identify and measure the effects of pollutants on the chemical, physical, and biological integrity of water, including those pollutants created by new technological developments.

\* \* \*

**§1258.[108] Pollution control in Great lakes**

**Demonstration projects**

(a) The Administrator, in cooperation with other Federal departments, agencies, and instrumentalities is authorized to enter into agreements with any State, political subdivision, interstate agency, or other public agency, or combination thereof, to carry out one or more projects to demonstrate new methods and techniques and to develop preliminary plans for the elimination or control of pollution, within all or any part of the watersheds of the Great Lakes. Such projects shall demonstrate the engineering and economic feasibility and practicality of removal of pollutants and prevention of any polluting matter from entering into the Great Lakes in the future and other reduction and remedial techniques which will contribute substantially to effective and practical methods of pollution prevention, reduction, or elimination.

\* \* \*

**SUBCHAPTER II – GRANTS FOR CONSTRUCTION OF TREATMENT WORKS**

**§1281.[201] Congressional declaration of purpose**

(a) It is the purpose of this subchapter to require and to assist the development and implementation of waste treatment management plans and practices which will achieve the goals of this chapter.

(b) Waste treatment management plans and practices shall provide for the application of the best practicable waste treatment technology before any discharge into receiving waters, including reclaiming and recycling of water, and confined disposal of pollutants so they will not migrate to cause water or other environmental pollution and shall provide for consideration of advanced waste treatment techniques.

(c) To the extent practicable, waste treatment management shall be on an areawide basis and provide control

or treatment of all point and nonpoint sources of pollution, including in place or accumulated pollution sources.

(d) The Administrator shall encourage waste treatment management which results in the construction of revenue producing facilities providing for —

(1) the recycling of potential sewage pollutants through the production of agriculture, silviculture, or aquaculture products, or any combination thereof;

(2) the confined and contained disposal of pollutants not recycled;

(3) the reclamation of wastewater; and

(4) the ultimate disposal of sludge in a manner that will not result in environmental hazards.

(e) The Administrator shall encourage waste treatment management which results in integrating facilities for sewage treatment and recycling with facilities to treat, dispose of, or utilize other industrial and municipal wastes, including but not limited to solid waste and waste heat and thermal discharges. Such integrated facilities shall be designed and operated to produce revenues in excess of capital and operation and maintenance costs and such revenues shall be used by the designated regional management agency to aid in financing other environmental improvement programs.

(f) The Administrator shall encourage waste treatment management which combines "open space" and recreational considerations with such management.

(g)(1) The Administrator is authorized to make grants to any State, municipality, or intermunicipal or interstate agency for the construction of publicly owned treatment works.

(2) The Administrator shall not make grants from funds authorized for any fiscal year beginning after June 30, 1974, to any State, municipality, or intermunicipal or interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treat-

ment works unless the grant applicant has satisfactorily demonstrated to the Administrator that —

(A) alternative waste management techniques have been studied and evaluated and the works proposed for grant assistance will provide for the application of the best practicable waste treatment technology over the life of the works consistent with the purposes of this subchapter; and

(B) as appropriate, the works propose for grant assistance will take into account and allow to the extent practicable the application of technology at a later date which will provide for the reclaiming or recycling of water or otherwise eliminate the discharge of pollutants.

(3) The Administrator shall not approve any grant after July 1, 1973, for treatment works under this section unless the applicant shows to the satisfaction of the Administrator that each sewer collection system discharging into such treatment works is not subject to excessive infiltration.

\* \* \*

(5) The Administrator shall not make grants from funds authorized for any fiscal year beginning after September 30, 1978, to any State, municipality, or intermunicipal or interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that innovative and alternative wastewater treatment processes and techniques which provide for the reclaiming and reuse of water, otherwise eliminate the discharge of pollutants, and utilize recycling techniques, land treatment, new or improved methods of waste treatment management for municipal and industrial waste (discharged into municipal systems) and the confined disposal of pollutants, so that pollutants will not migrate to cause water or other environmental pollution, have been fully studied and evaluated by the applicant taking into account subsection

(d) of this section and taking into account and allowing to the extent practicable the more efficient use of energy and resources.

(6) The Administrator shall not make grants from funds authorized for any fiscal year beginning after September 30, 1978, to any State, municipality, or intermunicipal or interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that the applicant has analyzed the potential recreation and open space opportunities in the planning of the proposed treatment works.

\* \* \*

(i) The Administrator shall encourage waste treatment management methods, processes, and techniques which will reduce total energy requirements.

(j) The Administrator is authorized to make a grant for any treatment works utilizing processes and techniques meeting the guidelines promulgated under section 1314 (d)(3) of this title, if the Administrator determines it is in the public interest and if in the cost effectiveness study made of the construction grant application for the purpose of evaluating alternative treatment works, the life cycle cost of the treatment works for which the grant is to be made does not exceed the life cycle cost of the most cost effective alternative by more than 15 per centum.

\* \* \*

#### **§1288. Areawide waste treatment management**

##### **Identification and designation of areas having substantial water quality control problems**

(a) For the purpose of encouraging and facilitating the development and implementation of areawide waste treatment management plans—

(1) The Administrator, within ninety days after October 18, 1972, and after consultation with appro-



priate Federal, State, and local authorities, shall by regulations publish guidelines for the identification of those areas which, as a result of urban-industrial concentrations of other factors, have substantial water quality control problems.

(2) The Governor of each State, within sixty days after publication of the guidelines issued pursuant to paragraph (1) of this subsection, shall identify each area within the State which, as a result of urban-industrial concentrations or other factors, has substantial water quality control problems. Not later than one hundred and twenty days following such identification and after consultation with appropriate elected and other officials of local governments having jurisdiction in such areas, the Governor shall designate (A) the boundaries of each such area, and (B) a single representative organization, including elected officials from local governments or their designees, capable of developing effective areawide waste treatment management plans for such area. The Governor may in the same manner at any later time identify any additional area (or modify an existing area) for which he determines areawide waste treatment management to be appropriate, designate the boundaries of such area, and designate an organization capable of developing effective areawide waste treatment management plans for such area.

(3) With respect to any area which, pursuant to the guidelines published under paragraph (1) of this subsection, is located in two or more States, the Governors of the respective States shall consult and cooperate in carrying out the provisions of paragraph (2), with a view toward designating the boundaries of the interstate area having common water quality control problems and for which areawide waste treatment management plans would be most effective, and toward designating, within one hundred and eighty days after publication of guidelines issued pursuant to paragraph (1) of this subsection, of a single repre-

sentative organization capable of developing effective areawide waste treatment management plans for such area.

(4) If a Governor does not act, either by designating or determining not to make a designation under paragraph (2) of this subsection, within the time required by such paragraph, or if, in the case of an interstate area, the Governors of the States involved do not designate a planning organization within the time required by paragraph (3) of this subsection, the chief elected officials of local governments within an area may by agreement designate (A) the boundaries for such an area, and (B) a single representative organization including elected officials from such local governments, or their designees, capable of developing an areawide waste treatment management plan for such area.

(5) Existing regional agencies may be designated under paragraphs (2), (3), and (4) of this subsection.

(6) The State shall act as a planning agency for all portions of such State which are not designated under paragraphs (2), (3), or (4) of this subsection.

(7) Designations under this subsection shall be subject to the approval of the Administrator.

#### **Planning process**

(b)(1)(A) Not later than one year after the date of designation of any organization under subsection (a) of this section such organization shall have in operation a continuing areawide waste treatment management planning process consistent with section 1281 of this title. Plans prepared in accordance with this process shall contain alternatives for waste treatment management, and be applicable to all wastes generated within the area involved. The initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than two years after the planning process is in operation.

(B) For any agency designated after 1975 under subsection (a) of this section and for all portions of a State for which the State is required to act as the planning agency in accordance with subsection (a)(6) of this section, the initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than three years after the receipt of the initial grant award authorized under subsection (f) of this section.

(2) Any plan prepared under such process shall include, but not be limited to—

(A) the identification of treatment works necessary to meet the anticipated municipal and industrial waste treatment needs of the area over a twenty-year period, annually updated (including an analysis of alternative waste treatment systems), including any requirements for the acquisition of land for treatment purposes; the necessary waste water collection and urban storm water runoff systems; and a program to provide the necessary financial arrangements for the development of such treatment works, and an identification of open space and recreation opportunities that can be expected to result from improved water quality, including consideration of potential use of lands associated with treatment works and increased access to water-based recreation;

(B) the establishment of construction priorities for such treatment works and time schedules for the initiation and completion of all treatment works;

(C) the establishment of a regulatory program to—

(i) implement the waste treatment management requirements of section 1281(C) of this title,

(ii) regulate the location, modification, and construction of any facilities within such area which may result in any discharge in such area, and

(iii) assure that any industrial or commercial wastes discharged into any treatment works in

such area meet applicable pretreatment requirements;

(D) the identification of those agencies necessary to construct, operate, and maintain all facilities required by the plan and otherwise to carry out the plan;

(E) the identification of the measures necessary to carry out the plan (including financing), the period of time necessary to carry out the plan, the costs of carrying out the plan within such time, and the economic, social, and environmental impact of carrying out the plan within such time;

(F) a process to (i) identify, if appropriate, agriculturally and silviculturally related nonpoint sources of pollution, including return flows from irrigated agriculture, and their cumulative effects, runoff from manure disposal areas, and from land used for livestock and crop production, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(G) a process to (i) identify, if appropriate, mine-related sources of pollution including new, current, and abandoned surface and underground mine runoff, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(H) a process to (i) identify construction activity related sources of pollution, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(I) a process to (i) identify, if appropriate, salt water intrusion into rivers, lakes, and estuaries resulting from reduction of fresh water flow from any cause, including irrigation, obstruction, ground water extraction, and diversion, and (ii) set forth procedures and methods to control such intrusion to the extent

feasible where such procedures and methods are otherwise a part of the waste treatment management plan;

(J) a process to control the disposition of all residual waste generated in such area which could affect water quality; and

(K) a process to control the disposal of pollutants on land or in subsurface excavations within such area to protect ground and surface water quality.

(3) Areawide waste treatment management plans shall be certified annually by the Governor or his designee (or Governors of their designees, where more than one State is involved) as being consistent with applicable basin plans and such areawide waste treatment management plans shall be submitted to the Administrator for his approval.

(4)(A) Whenever the Governor of any State determines (and notifies the Administrator) that consistency with a statewide regulatory program under section 1313 of this title so requires, the requirements of clauses (F) through (K) of paragraph (2) of this subsection shall be developed and submitted by the Governor to the Administrator for approval for application to a class or category of activity throughout such State.

(B) Any program submitted under subparagraph (A) of this paragraph which, in whole or in part, is to control the discharge or other placement of dredge or fill material into the navigable waters shall include the following:

(i) A consultation process which includes the State agency with primary jurisdiction over fish and wildlife resources.

(ii) A process to identify and manage the discharge or other placement of dredged or fill material which adversely affects navigable waters, which shall complement and be coordinated with a State program under section 1344 of this title conducted pursuant to this chapter.



(iii) A process to assure that any activity conducted pursuant to a best management practice will comply with the guidelines established under section 1344(b)(1) of this title, and sections 1317 and 1343 of this title.

(iv) A process to assure that any activity conducted pursuant to a best management practice can be terminated or modified for cause including, but not limited to, the following:

(I) violation of any condition of the best management practice;

(II) change in any activity that requires either a temporary or permanent reduction or elimination of the discharge pursuant to the best management practice.

(v) A process to assure continued coordination with Federal and Federal-State water-related planning and reviewing processes, including the National Wetlands Inventory.

(C) If the Governor of a State obtains approval from the Administrator of a statewide regulatory program which meets the requirements of subparagraph (B) of this paragraph and if such State is administering a permit program under section 1344 of this title, no person shall be required to obtain an individual permit pursuant to such section, or to comply with a general permit issued pursuant to such section, with respect to any appropriate activity within such State for which a best management practice has been approved by the Administrator under the program approved by the Administrator pursuant to this paragraph.

(D)(i) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with the requirements of this section, the Administrator shall so notify the State, and if appropriate corrective action is not taken within a reasonable time, not to exceed ninety

days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(ii) In the case of a State with a program submitted and approved under this paragraph, the Administrator shall withdraw approval of such program under this subparagraph only for a substantial failure of the State to administer its program in accordance with the requirements of this paragraph.

### **Regional operating agencies**

(c)(1) The Governor of each State, in consultation with the planning agency designated under subsection (a) of this section, at the time a plan is submitted to the Administrator, shall designate one or more waste treatment management agencies (which may be an existing or newly created local, regional, or State agency or political subdivision) for each area designated under subsection (a) of this section and submit such designations to the Administrator.

(2) The Administrator shall accept any such designation, unless, within 120 days of such designation, he finds that the designated management agency (or agencies) does not have adequate authority—

(A) to carry out appropriate portions of an area-wide waste treatment management plan developed under subsection (b) of this section;

(B) to manage effectively waste treatment works and related facilities serving such area in conformance with any plan required by subsection (b) of this section;

(C) directly or by contract, to design and construct new works, and to operate and maintain new and existing works as required by any plan developed pursuant to subsection (b) of this section;

(D) to accept and utilize grants, or other funds from any source, for waste treatment management purposes;

(E) to raise revenues, including the assessment of waste treatment charges;

(F) to incur short- and long-term indebtedness;

(G) to assure in implementation of an areawide waste treatment management plan that each participating community pays its proportionate share of treatment costs;

(H) to refuse to receive any wastes from any municipality or subdivision thereof, which does not comply with any provisions of an approved plan under this section applicable to such area; and

(I) to accept for treatment industrial wastes.

#### **Conformity of works with area plan**

(d) After a waste treatment management agency having the authority required by subsection (c) of this section has been designated under such subsection for an area and a plan for such area has been approved under subsection (b) of this section, the Administrator shall not make any grant for construction of a publicly owned treatment works under section 1281(g)(1) of this title within such area except to such designated agency and for works in conformity with such plan.

#### **Permits not to conflict with approved plans**

(e) No permit under section 1342 of this title shall be issued for any point source which is in conflict with a plan approved pursuant to subsection (b) of this section.

#### **Grants**

(f)(1) The Administrator shall make grants to any agency designated under subsection (a) of this section for pay-

ment of the reasonable costs of developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section.

(2) For the two-year period beginning on the date the first grant is made under paragraph (1) of this subsection to an agency, if such first grant is made before October 1, 1977, the amount of each such grant to such agency shall be 100 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section, and thereafter the amount granted to such agency shall not exceed 75 per centum of such costs in each succeeding one-year period. In the case of any other grant made to an agency under such paragraph (1) of this subsection, the amount of such grant shall not exceed 75 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process in any year.

(3) Each applicant for a grant under this subsection shall submit to the Administrator for his approval each proposal for which a grant is applied for under this subsection. The Administrator shall act upon such proposal as soon as practicable after it has been submitted, and his approval of that proposal shall be deemed a contractual obligation of the United States for the payment of its contribution to such proposal, subject to such amounts as are provided in appropriation Acts. There is authorized to be appropriated to carry out this subsection not to exceed \$50,000,000 for the fiscal year ending June 30, 1973, not to exceed \$100,000,000 for the fiscal year ending June 30, 1974, and not to exceed \$150,000,000 per fiscal year for the fiscal years ending June 30, 1975, September 30, 1977, September 30, 1978, September 30, 1979, and September 30, 1980, and not to exceed \$100,000,000 per fiscal year for the fiscal years ending September 30, 1981, and September 30, 1982.

**Technical assistance by Administrator;  
development of management plans**

(g) The Administrator is authorized, upon request of the Governor or the designated planning agency, and without reimbursement, to consult with, and provide technical assistance to, any agency designated under subsection (a) of this section in the development of areawide waste treatment management plans under subsection (b) of this section.

**Technical assistance by Secretary of Army;  
development and operation  
of management planning process**

(h)(1) The Secretary of the Army, acting through the Chief of Engineers, in cooperation with the Administrator is authorized and directed, upon request of the Governor or the designated planning organization, to consult with, and provide technical assistance to, any agency designed<sup>1</sup> under subsection (a) of this section in developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section.

(2) There is authorized to be appropriated to the Secretary of the Army, to carry out this subsection, not to exceed \$50,000,000 per fiscal year for the fiscal years ending June 30, 1973 and June 30, 1974.

<sup>1</sup> So in original. Probably should read "designated".

**Technical assistance by Secretary of Interior;  
State best management  
practices program; National Wetlands Inventory  
and information to States**

(i)(1) The Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, shall, upon request of the Governor of a State, and without reimbursement, provide technical assistance to such State in developing a statewide program for submission to the Administrator under subsection (b)(4)(B) of



this section and in implementing such program after its approval.

(2) There is authorized to be appropriated to the Secretary of the Interior \$6,000,000 to complete the National Wetlands Inventory of the United States, by December 31, 1981, and to provide information from such Inventory to States as it becomes available to assist such States in the development and operation of programs under this chapter.

#### **Agricultural cost sharing**

(j)(1) The Secretary of Agriculture, with the concurrence of the Administrator, and acting through the Soil Conservation Service and such other agencies of the Department of Agriculture as the Secretary may designate, is authorized and directed to establish and administer a program to enter into contracts, subject to such amounts as are provided in advance by appropriation acts, of not less than five years nor more than ten years with owners and operators having control of rural land for the purpose of installing and maintaining measures incorporating best management practices to control nonpoint source pollution for improved water quality in those States or areas for which the Administrator has approved a plan under subsection (b) of this section where the practices to which the contracts apply are certified by the management agency designated under subsection (c)(1) of this section to be consistent with such plans and will result in improved water quality. Such contracts may be entered into during the period ending not later than September 31, 1988. Under such contracts the land owner or operator shall agree—

(i) to effectuate a plan approved by a soil conservation district, where one exists, under this section for his farm, ranch, or other land substantially in accordance with the schedule outlined therein unless any requirement thereof is waived or modified by the Secretary;

(ii) to forfeit all rights to further payments or grants under the contract and refund to the United States all payments and grants received thereunder, with interest, upon his violation of the contract at any stage during the time he has control of the land if the Secretary, after considering the recommendations of the soil conservation district, where one exists, and the Administrator, determines that such violation is of such a nature as to warrant termination of the contract, or to make refunds or accept such payment adjustments as the Secretary may deem appropriate if he determines that the violation by the owner or operator does not warrant termination of the contract;

(iii) upon transfer of his right and interest in the farm, ranch, or other land during the contract period to forfeit all rights to further payments or grants under the contract and refund to the United States all payments or grants received thereunder, with interest, unless the transferee of any such land agrees with the Secretary to assume all obligations of the contract;

(iv) not to adopt any practice specified by the Secretary on the advice of the Administrator in the contract as a practice which would tend to defeat the purposes of the contract;

(v) to such additional provisions as the Secretary determines are desirable and includes in the contract to effectuate the purposes of the program or to facilitate the practical administration of the program.

(2) In return for such agreement by the landowner or operator the Secretary shall agree to provide technical assistance and share the cost of carrying out those conservation practices and measures set forth in the contract for which he determines that cost sharing is appropriate and in the public interest and which are approved for cost sharing by the agency designated to implement the plan developed under subsection (b) of this section. The por-

tion of such cost (including labor) to be shared shall be that part which the Secretary determines is necessary and appropriate to effectuate the installation of the water quality management practices and measures under the contract, but not to exceed 50 per centum of the total cost of the measures set forth in the contract; except the Secretary may increase the matching cost share where he determines that (1) the main benefits to be derived from the measures are related to improving offsite water quality, and (2) the matching share requirement would place a burden on the landowner which would probably prevent him from participating in the program.

(3) The Secretary may terminate any contract with a landowner or operator by mutual agreement with the owner or operator if the Secretary determines that such termination would be in the public interest, and may agree to such modification of contracts previously entered into as he may determine to be desirable to carry out the purposes of the program or facilitate the practical administration thereof or to accomplish equitable treatment with respect to other conservation, land use, or water quality programs.

(4) In providing assistance under this subsection the Secretary will give priority to those areas and sources that have the most significant effect upon water quality. Additional investigations or plans may be made, where necessary, to supplement approved water quality management plans, in order to determine priorities.

(5) The Secretary shall, where practicable, enter into agreements with soil conservation districts, State soil and water conservation agencies, or State water quality agencies to administer all or part of the program established in this subsection under regulations developed by the Secretary. Such agreements shall provide for the submission of such reports as the Secretary deems necessary, and for payment by the United States of such portion of the costs incurred in the administration of the program as the Secretary may deem appropriate.

(6) The contracts under this subsection shall be entered into only in areas where the management agency designated under subsection (c)(1) of this section assures an adequate level of participation by owners and operators having control of rural land in such areas. Within such areas the local soil conservation district, where one exists, together with the Secretary of Agriculture, will determine the priority of assistance among individual land owners and operators to assure that the most critical water quality problems are addressed.

(7) The Secretary, in consultation with the Administrator and subject to section 1314(k) of this title, shall, not later than September 30, 1978, promulgate regulations for carrying out this subsection and for support and cooperation with other Federal and non-Federal agencies for implementation of this subsection.

(8) This program shall not be used to authorize or finance projects that would otherwise be eligible for assistance under the terms of Public Law 83-566.

(9) There are hereby authorized to be appropriated to the Secretary of Agriculture \$200,000,000 for fiscal year 1979, \$400,000,000 for fiscal year 1980, \$100,000,000 for fiscal year 1981, and \$100,000,000 for fiscal year 1982, to carry out this subsection. The program authorized under this subsection shall be in addition to, and not in substitution of, other programs in such area authorized by this or any other public law.

#### **§1297.[217] Guidelines for cost-effectiveness analysis**

Any guidelines for cost-effectiveness analysis published by the Administrator under this subchapter shall provide for the identification and selection of cost effective alternatives to comply with the objective and goals of this chapter and sections 1281(b), 1281(d), 1281(g)(2)(A), and 1311(b)(2)(B) of this title.

**§1311.[301] Effluent limitations**

**Illegality of pollutant discharges except in compliance with law**

(a) Except as in compliance with the [Act], section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

**Timetable for achievement of objectives**

(b) In order to carry out the objective of this chapter there shall be achieved —

\* \* \*

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

\* \* \*

(B) not later than July 1, 1983, compliance by all publicly owned treatment works with the requirements set forth in section 1281(g)(2)(A) of this title;

\* \* \*

**Waiver for certain pollutants**

(g)(1) The Administrator, with the concurrence of the State, shall modify the requirements of subsection (b)(2)(A)



of this section with respect of the discharge of any pollutant (other than pollutants identified pursuant to section 1314(a)(4) of this title, toxic pollutants subject to section 1317(a) of this title, and the thermal component of discharges) from any point source upon a showing by the owner or operator of such point source satisfactory to the Administrator that—

(A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

(B) such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

\* \* \*

#### **Modification of secondary treatment requirements**

(h) The Administrator, with the concurrence of the State, may issue a permit under section 1342 of this title which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that—

(1) there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 1314(a)(6) of this title;

(2) such modified requirements will not interfere with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife, and allows recreational activities, in and on the water;

(3) the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable;

(4) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(5) all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

(6) to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

(7) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(8) any funds available to the owner of such treatment works under subchapter II of this chapter will be used to achieve the degree of effluent reduction required by section 1281(b) and (g)(2)(A) of this title or to carry out the requirements of this subsection.

For the purposes of this subsection the phrase "the discharge of any pollutant into marine waters" refers to a discharge into deep waters of the territorial sea or the

waters of the contiguous zone, or into saline estuarine waters where there is strong tidal movement and other hydrological and geological characteristics which the Administrator determines necessary to allow compliance with paragraph (2) of this subsection, and section 1251(a)(2) of this title.

\* \* \*

### **Innovative technology**

(k) In the case of any facility subject to a permit under section 1342 of this title which proposes to comply with the requirements of subsection (b)(2)(A) of this section by replacing existing production capacity with an innovative production process which will result in an effluent reduction significantly greater than that required by the limitation otherwise applicable to such facility and moves toward the national goal of eliminating the discharge of all pollutants, or with the installation of an innovative control technique that has a substantial likelihood for enabling the facility to comply with the applicable effluent limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable, the Administrator (or the State with an approved program under section 1342 of this title, in consultation with the Administrator) may establish a date for compliance under subsection (b)(2)(A) of this section not later than July 1, 1987, if it is also determined that such innovative system has the potential for industrywide application.

\* \* \*

**§1312.[302] Water quality related effluent limitations****Establishment**

(a) Whenever, in the judgment of the Administrator, discharges of pollutants from a point source or group of point sources, with the application of effluent limitations required under section 1311(b)(2) of this title, would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water, effluent limitations (including alternative effluent control strategies) for such point source or sources shall be established which can reasonably be expected to contribute to the attainment or maintenance of such water quality.

**Notice; hearing; adjustment of limitation by Administrator**

(b)(1) Prior to establishment of any effluent limitation pursuant to subsection (a) of this section, the Administrator shall issue notice of intent to establish such limitation and within ninety days of such notice hold a public hearing to determine the relationship of the economic and social costs of achieving any such limitation or limitations, including any economic or social dislocation in the affected community or communities, to the social and economic benefits to be obtained (including the attainment of the objective of this chapter) and to determine whether or not such effluent limitations can be implemented with available technology or other alternative control strategies.

(2) If a person affected by such limitation demonstrates at such hearing that (whether or not such technology or other alternative control strategies are available) there is no reasonable relationship between the economic and social costs and the benefits to be obtained (including attainment of the objective of this chapter), such limitation shall not become effective and the Administrator shall adjust such limitation as it applies to such person.

**§1313.[303] Water quality standards and implementation plans****Existing water quality standards**

(a)(1) In order to carry out the purpose of this chapter, any water quality standard applicable to interstate waters which was adopted by any State and submitted to, and approved by, or is awaiting approval by, the Administrator pursuant to this Act as in effect immediately prior to October 18, 1972, shall remain in effect unless the Administrator determined that such standard is not consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972. If the Administrator makes such a determination he shall, within three months after October 18, 1972, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after the date of such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

(2) Any State which, before October 18, 1972, has adopted, pursuant to its own law, water quality standards applicable to intrastate waters shall submit such standards to the Administrator within thirty days after October 18, 1972. Each such standard shall remain in effect, in the same manner and to the same extent as any other water quality standard established under this chapter unless the Administrator determines that such standard is inconsistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972. If the Administrator makes such a determination he shall not later than the one hundred and twentieth day after the date of submission of such standards, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

(3)(A) Any State which prior to October 18, 1972, has not adopted pursuant to its own laws water quality stand-



ards applicable to intrastate waters shall, not later than one hundred and eighty days after October 18, 1972, adopt and submit such standards to the Administrator.

(B) If the Administrator determines that any such standards are consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall approve such standards.

(C) If the Administrator determines that any such standards are not consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall, not later than the ninetieth day after the date of submission of such standards, notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standards pursuant to subsection (b) of this section.

#### **Proposed regulations**

(b)(1) The Administrator shall promptly prepare and publish proposed regulations setting forth water quality standards for a State in accordance with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, if—

(A) the State fails to submit water quality standards within the times prescribed in subsection (a) of this section,

(B) a water quality standard submitted by such State under subsection (a) of this section is determined by the Administrator not to be consistent with the applicable requirements of subsection (a) of this section.

(2) The Administrator shall promulgate any water quality standard published in a proposed regulation not later than one hundred and ninety days after the date he publishes any such proposed standard, unless prior to such promulgation, such State has adopted a water quality standard which the Administrator determines to be in accordance with subsection (a) of this section.

**Review; revised standards; publication**

(c)(1) The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with October 18, 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator.

(2) Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

(3) If the Administrator, within sixty days after the date of submission of the revised or new standard, determines that such standard meets the requirements of this chapter, such standard shall thereafter be the water quality standard for the applicable waters of that State. If the Administrator determines that any such revised or new standard is not consistent with the applicable requirements of this chapter, he shall not later than the ninetieth day after the date of submission of such standard notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standard pursuant to paragraph (4) of this subsection.

(4) The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or

new water quality standard for the navigable waters involved—

(A) if a revised or new water quality standard submitted by such State under paragraph (3) of this subsection for such waters is determined by the Administrator not to be consistent with the applicable requirements of this chapter, or

(B) in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this chapter.

The Administrator shall promulgate any revised or new standard under this paragraph not later than ninety days after he publishes such proposed standards, unless prior to such promulgation, such State has adopted a revised or new water quality standard which the Administrator determines to be in accordance with this chapter.

**Identification of areas with insufficient controls;  
maximum daily load**

(d)(1)(A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

(B) Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 1311 of this title are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under

section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

(D) Each State shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balances, indigenous population of shellfish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in the identified waters or parts thereof.

(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 1314(a)(2)(D) of the title, for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

(3) For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife.

#### **Continuing planning process**

(e)(1) Each State shall have a continuing planning process approved under paragraph (2) of this subsection which is consistent with this chapter.

(2) Each State shall submit not later than 120 days after October 18, 1972, to the Administrator for his approval a proposed continuing planning process which is consistent with this chapter. Not later than thirty days after the date of submission of such a process the Administrator shall either approve or disapprove such process. The Administrator shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times consistent with this chapter. The Administrator shall not approve any State permit program under subchapter IV of this chapter for any State which does not have an approved continuing planning process under this section.

(3) The Administrator shall approve any continuing planning process submitted to him under this section which will result in plans for all navigable waters within such State, which include, but are not limited to, the following:

(A) effluent limitations and schedules of compliance at least as stringent as those required by section 1311(b)(1), section 1311(b)(2), section 1316, and section 1317 of this title, and at least as stringent as any requirements contained in any applicable water quality standard in effect under authority of this section;



(B) the incorporation of all elements of any applicable areawide waste management plans under section 1288 of this title, and applicable basin plans under section 1289 of this title;

(C) total maximum daily load for pollutants in accordance with subsection (d) of this section;

(D) procedures for revision;

(E) adequate authority for intergovernmental cooperation;

(F) adequate implementation, including schedules of compliance, for revised or new water quality standards, under subsection (c) of this section;

(G) controls over the disposition of all residual waste from any water treatment processing;

(H) an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 1311 and 1312 of this title.

#### **Earlier compliance**

(f) Nothing in this section shall be construed to affect any effluent limitation, or schedule of compliance required by any State to be implemented prior to the dates set forth in sections 1311(b)(1) and 1311(b)(2) of this title nor to preclude any State from requiring compliance with any effluent limitation or schedule of compliance at dates earlier than such dates.

#### **Heat standards**

(g) Water quality standards relating to heat shall be consistent with the requirements of section 1326 of this title.

#### **Thermal water quality standards**

(h) For the purposes of this chapter the term "water quality standards" includes thermal water quality standards.

\* \* \*

# **§1314.[304] Information and guidelines**

## **Criteria development and publication**

(a)(1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) criteria for water quality accurately reflecting the latest scientific knowledge (A) on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics, and recreation which may be expected from the presence of pollutants in any body of water, including ground water; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on biological community diversity, productivity, and stability, including information on the factors affecting rates of eutrophication and rates of organic and inorganic sedimentation for varying types of receiving waters.

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) information (A) on the factors necessary to restore and maintain the chemical, physical, and biological integrity of all navigable waters, ground waters, waters of the contiguous zone, and the oceans; (B) on the factors necessary for the protection and propagation of shellfish, fish, and wildlife for classes and categories of receiving waters and to allow recreational activities in and on the water; and (C) on the measurement and classification of water quality. . . .

\* \* \*

(4) The Administrator shall, within 90 days after December 27, 1977, and from time to time thereafter, publish and revise as appropriate information identifying conventional pollutants, including but not limited to, pollutants classified as biological oxygen demanding, suspended

solids, fecal coliform, and pH. The thermal component of any discharge shall not be identified as a conventional pollutant under this paragraph.

(5)(A) The Administrator, to the extent practicable before consideration of any request under section 1311 (g) of this title and within six months after December 27, 1977, shall develop and publish information on the factors necessary for the protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and to allow recreational activities in and on the water.

(B) The Administrator, to the extent practicable before consideration of any application under section 1311(h) of this title and within six months after December 27, 1977, shall develop and publish information on the factors necessary for the protection of public water supplies, and the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife, and to allow recreational activities, in and on the water.

\* \* \*

#### **Effluent limitation guidelines**

(b) For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, published within one year of October 18, 1972, regulations, providing guidelines for effluent limitations, and, at least annually thereafter, revise, if appropriate, such regulations. . . .

\* \* \*

#### **§1315.[305] State reports on water quality; transmittal to Congress**

(a) Omitted.

(b)(1) Each State shall prepare and submit to the Administrator by April 1, 1975, and shall bring up to date

by April 1, 1976, and biennially thereafter, a report which shall include—

(A) a description of the water quality of all navigable waters in such State during the preceding year, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, correlated with the quality of water required by the objective of this chapter (as identified by the Administrator pursuant to criteria published under section 1314(a) of this title) and the water quality described in subparagraph (B) of this paragraph;

(B) an analysis of the extent to which all navigable waters of such State provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water;

(C) an analysis of the extent to which the elimination of the discharge of pollutants and a level of water quality which provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows recreational activities in and on the water, have been or will be achieved by the requirements of this chapter, together with recommendations as to additional action necessary to achieve such objectives and for what waters such additional action is necessary;

(D) an estimate of (i) the environmental impact, (ii) the economic and social costs necessary to achieve the objective of this chapter in such State, (iii) the economic and social benefits of such achievement, and (iv) an estimate of the date of such achievement; and

(E) a description of the nature and extent of non-point sources of pollutants, and recommendations as to the programs which must be undertaken to control each category of such sources, including an estimate of the costs of implementing such programs.

(2) The Administrator shall transmit such State reports, together with an analysis thereof, to Congress on or before October 1, 1975, and October 1, 1976, and biennially thereafter.

\* \* \*

**§1316.[306] National standards of performance**

\* \* \*

**State enforcement of standards of performance**

(c) Each State may develop and submit to the Administrator a procedure under State law for applying and enforcing standards of performance for new sources located in such State. If the Administrator finds that the procedure and the law of any State require the application and enforcement of standards of performance to at least the same extent as required by this section, such State is authorized to apply and enforce such standards of performance (except with respect to new sources owned or operated by the United States).

\* \* \*

**§1317.[307] Toxic and pretreatment effluent standards**

**Toxic pollutant list; revision; hearing; promulgation of standards; effective date; consultation**

(a)(1) On and after December 27, 1977, the list of toxic pollutants or combination of pollutants subject to this chapter shall consist of those toxic pollutants listed in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives, and the Administrator shall publish, not later than the thirtieth day after December 27, 1977, that list. From time to time thereafter, the Administrator may revise such list and the Administrator is authorized to add to or remove from such list any pollutant. The Administrator in publishing any revised list, including the addition or removal of any pollutant from such list, shall



take into account toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms, and the nature and extent of the effect of the toxic pollutant on such organisms. A determination of the Administrator under this paragraph shall be final except that if, on judicial review, such determination was based on arbitrary and capricious action of the Administrator, the Administrator shall make a redetermination.

(2) Each toxic pollutant listed in accordance with paragraph (1) of this subsection shall be subject to effluent limitations resulting from the application of the best available technology economically achievable for the applicable category or class of point sources established in accordance with sections 1311(b)(2)(A) and 1314(b)(2) of this title.

. . .

\* \* \*

(4) Any effluent standard promulgated under this section shall be at that level which the Administrator determines provides an ample margin of safety.

\* \* \*

#### **§1319.[309] Enforcement**

##### **State enforcement; compliance orders**

(a)(1) Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of any condition or limitation which implements section 1311, 1312, 1316, 1317, 1318, 1328, or 1345 of this title in a permit issued by a State under an approved permit program under section 1342 or 1344 of this title, he shall proceed under his authority in paragraph (3) of this subsection or he shall notify the person in alleged violation and such State of such finding. If beyond the thirtieth day after the Administrator's notification the State had not commenced the appropriate enforcement action, the Administrator shall issue an order requiring such person to comply with such condition or

limitation or shall bring a civil action in accordance with subsection (b) of this section.

(2) Whenever, on the basis of information available to him, the Administrator finds that violations of permit conditions or limitations as set forth in paragraph (1) of this subsection are so widespread that such violations appear to result from a failure of the State to enforce such permit conditions or limitations effectively, he shall so notify the State. If the Administrator finds such failure extends beyond the thirtieth day after such notice, he shall give public notice of such finding. During the period beginning with such public notice and ending when such State satisfies the Administrator that it will enforce such conditions and limitations (hereafter referred to in this section as the period of "federally assumed enforcement"), except where an extension has been granted under paragraph (5)(B) of this subsection, the Administrator shall enforce any permit condition or limitation with respect to any person —

(A) by issuing an order to comply with such condition or limitation, or

(B) by bringing a civil action under subsection (b) of this section.

(3) Whenever on the basis of any information available to him the Administrator finds that any person is in violation of section 1311, 1312, 1316, 1317, 1318, 1328, or 1345 of this title, or is in violation of any permit condition or limitation implementing any of such sections in a permit issued under section 1342 of this title by him or by a State or in a permit issued under section 1344 of this title by a State, he shall issue an order requiring such person to comply with such section or requirement, or he shall bring a civil action in accordance with subsection (b) of this section.

(4) A copy of any order issued under this subsection shall be sent immediately by the Administrator to the State in which the violation occurs and other affected States. In any case in which an order under this subsec-

tion (or notice to a violator under paragraph (1) of this subsection) is issued to a corporation, a copy of such order (or notice) shall be served on any appropriate corporate officers. An order issued under this subsection relating to a violation of section 1318 of this title shall not take effect until the person to whom it is issued has had an opportunity to confer with the Administrator concerning the alleged violation.

\* \* \*

### Civil actions

(b) The Administrator is authorized to commence a civil action for appropriate relief, including a permanent or temporary injunction, for any violation for which he is authorized to issue a compliance order under subsection (a) of this section. Any action under this subsection may be brought in the district court of the United States for the district in which the defendant is located or resides or is doing business, and such court shall have jurisdiction to restrain such violation and to require compliance. Notice of the commencement of such action shall be given immediately to the appropriate State.

### Criminal penalties

(c)(1) Any person who willfully or negligently violates section 1311, 1312, 1316, 1317, or 1318 of this title, or any permit condition or limitation implementing any of such sections in a permit issued under section 1342 of this title by the Administrator or by a State or in a permit issued under section 1344 of this title by a State, shall be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or by both. If the conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two years, or both. —

\* \* \*



**Civil penalties**

(d) Any person who violates section 1311, 1312, 1316, 1317, 1318, 1328, or 1345 of this title, or any permit condition or limitation implementing any of such sections in a permit issued under section 1342 of this title by the Administrator, or by a State, or in a permit issued under section 1344 of this title by a State, and any person who violates any order issued by the Administrator under subsection (a) of this section, shall be subject to a civil penalty not to exceed \$10,000 per day of such violation.

\* \* \*

**§1322.[312] Marine sanitation devices**

\* \* \*

**Regulation by States or political subdivisions thereof;  
complete prohibition upon discharge of sewage**

(f)(1) After the effective date of the initial standards and regulations promulgated under this section, no State or political subdivision thereof shall adopt or enforce any statute or regulation of such State or political subdivision with respect to the design, manufacture, or installation or use of any marine sanitation device on any vessel subject to the provisions of this section.

\* \* \*

(3) After the effective date of the initial standards and regulations promulgated under this section, if any State determines that the protection and enhancement of the quality of some or all of the waters within such State require greater environmental protection, such State may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into such waters, except that no such prohibition shall apply until the Administrator determines that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for such water to which such prohibition would apply. Upon application of the State, the Administrator shall make such determination within 90 days of the date of such application.

(4)(A) If the Administrator determines upon application by a State that the protection and enhancement of the quality of specified waters within such State requires such a prohibition, he shall by regulation completely prohibit the discharge from a vessel of any sewage (whether treated or not) into such waters.

(B) Upon application by a State, the Administrator shall, by regulation, establish a drinking water intake zone in any waters within such State and prohibit the discharge of sewage from vessels within that zone.

\* \* \*

#### **§1324.[314] Clean lakes**

##### **Identification and classification; pollution sources control procedures; quality restoration procedures**

(a) Each State shall prepare or establish, and submit to the Administrator for his approval—

(1) an identification and classification according to eutrophic condition of all publicly owned fresh water lakes in such State;

(2) procedures, processes, and methods (including land use requirements), to control sources of pollution of such lakes; and

(3) methods and procedures, in conjunction with appropriate Federal agencies, to restore the quality of such lakes.

##### **Financial assistance**

(b) The Administrator shall provide financial assistance to States in order to carry out methods and procedures approved by him under this section. The Administrator shall provide financial assistance to States to prepare the identification and classification surveys required in subsection (a)(1) of this section.



**Grants; limitation of amounts; authorization of appropriations; equitable distribution**

(c)(1) The amount granted to any State for any fiscal year under this section shall not exceed 70 per centum of the funds expended by such State in such year for carrying out approved methods and procedures under this section.

(2) There is authorized to be appropriated \$50,000,000 for the fiscal year ending June 30, 1973; \$100,000,000 for the fiscal year 1974; \$150,000,000 for the fiscal year 1975, \$50,000,000 for fiscal year 1977, \$60,000,000 for fiscal year 1978, \$60,000,000 for fiscal year 1979, \$60,000,000 for fiscal year 1980, \$30,000,000 for fiscal year 1981, and \$30,000,000 for fiscal year 1982 for grants to States under this section which such sums shall remain available until expended. The Administrator shall provide for an equitable distribution of such sums to the States with approved methods and procedures under this section.

\* \* \*

**§1325.[315] National Study Commission**

**Establishment**

(a) There is established a National Study Commission, which shall make a full and complete investigation and study of all of the technological aspects of achieving, and all aspects of the total economic, social, and environmental effects of achieving or not achieving, the effluent limitations and goals set forth for 1983 in section 1311(b)(2) of this title.

\* \* \*

**§1326.[316] Thermal discharges**

**Effluent limitations that will assure protection  
and propagation of balanced,  
indigenous population of shellfish, fish, and wildlife**

(a) With respect to any point source otherwise subject to the provisions of section 1311 of this title or section 1316 of this title, whenever the owner or operator of any such source, after opportunity for public hearing, can demonstrate to the satisfaction of the Administrator (or, if appropriate, the State) that any effluent limitation proposed for the control of the thermal component of any discharge from such source will require effluent limitations more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made, the Administrator (or, if appropriate, the State) may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water.

\* \* \*

**SUBCHAPTER IV — PERMITS AND LICENSES****§1341.[401] Certification**

**Compliance with applicable requirements; application;  
procedures; license suspension**

(a)(1) Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters

at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title. . . .

(2) Upon receipt of such application and certification the licensing or permitting agency shall immediately notify the Administrator of such application and certification. Whenever such a discharge may affect, as determined by the Administrator, the quality of the waters of any other State, the Administrator within thirty days of the date of notice of application for such Federal license or permit shall so notify such other State, the licensing or permitting agency, and the applicant. If, within sixty days after receipt of such notification, such other State determines that such discharge will affect the quality of its waters so as to violate any water quality requirement in such State, and within such sixty-day period notifies the Administrator and the licensing or permitting agency in writing of its objection to the issuance of such license or permit and requests a public hearing on such objection, the licensing or permitting agency shall hold such a hearing. The Administrator shall at such hearing submit his evaluation and recommendations with respect to any such objection to the licensing or permitting agency. Such agency, based upon the recommendations of such State, the Administrator, and upon any additional evidence, if any, presented to the agency at the hearing, shall condition such license or permit in such manner as may be necessary to insure compliance with applicable water quality requirements. If the imposition of conditions cannot insure such compliance such agency shall not issue such license or permit.

\* \* \*

**§1342.[402] National pollutant discharge elimination system**  
**Permits for discharge of pollutants**

(a)(1) Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for

public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants . . . upon condition that such discharge will meet either all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection. . .

(3) The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.

\* \* \*

#### **State permit programs**

(b) At any time after the promulgation of the guidelines required by subsection (h)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. . . . The Administrator shall approve each such submitted program unless he determines that adequate authority does not exist:

\* \* \*

(3) To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

\* \* \*

(5) To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

\* \* \*

#### **Notification of Administrator**

(d)(1) Each State shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.

(3) The Administrator may, as to any permit application, waive paragraph (2) of this subsection.

\* \* \*



### **Waiver of notification requirement**

(e) In accordance with guidelines promulgated pursuant to subsection (h)(2) of section 1314 of this title, the Administrator is authorized to waive the requirements of subsection (d) of this section at the time he approves a program pursuant to subsection (b) of this section for any category (including any class, type, or size within such category) of point sources within the State submitting such program.

\* \* \*

### **Compliance with permits**

(k) Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1312, 1316, 1317, and 1343 of this title, except any standard imposed under section 1317 of this title for a toxic pollutant injurious to human health. . . .

\* \* \*

## **§1344.[404] Permits for dredged or fill material**

### **Discharge into navigable waters at specified disposal sites**

(a) The Secretary may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters as specified disposal sites. Not later than the fifteenth day after the date an applicant submits all the information required to complete an application for a permit under this subsection, the Secretary shall publish the notice required by this subsection.

### **Specification of disposal site**

(b) Subject to subsection (c) of this section, each such disposal site shall be specified for each such permit by

the Secretary (1) through the application of guidelines developed by the Administrator, in conjunction with the Secretary, which guidelines shall be based upon criteria comparable to the criteria applicable to the territorial seas, the contiguous zone, and the ocean under section 1343(c) of this title, and (2) in any case where such guidelines under clause (1) alone would prohibit the specification of a site, through the application additionally of the economic impact of the site on navigation and anchorage.

#### **Denial or restriction of use of defined areas as disposal sites**

(c) The Administrator is authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever he determines, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas. Before making such determination, the Administrator shall consult with the Secretary. The Administrator shall set forth in writing and make public his findings and his reasons for making any determination under this subsection.

#### **Definition**

(d) The term "Secretary" as used in this section means the Secretary of the Army, acting through the Chief of Engineers.

#### **General permits on State, regional, or nationwide basis**

(e)(1) In carrying out his functions relating to the discharge of dredged or fill material under this section, the Secretary may, after notice and opportunity for public

hearing, issue general permits on a State, regional, or nationwide basis for any category of activities involving discharges of dredged or fill material if the Secretary determines that the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effect on the environment. Any general permit issued under this subsection shall (A) be based on the guidelines described in subsection (b)(1) of this section, and (B) set forth the requirements and standards which shall apply to any activity authorized by such general permit.

(2) No general permit issued under this subsection shall be for a period of more than five years after the date of its issuance and such general permit may be revoked or modified by the Secretary if, after opportunity for public hearing, the Secretary determines that the activities authorized by such general permit have an adverse impact on the environment or such activities are more appropriately authorized by individual permits.

#### **Non-prohibited discharge of dredged or fill material**

(f)(1) Except as provided in paragraph (2) of this subsection, the discharge of dredged or fill material—

(A) from normal farming, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices;

(B) for the purpose of maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, and bridge abutments or approaches, and transportation structures;

(C) for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches;

(D) for the purpose of construction of temporary sedimentation basins on a construction site which does not include placement of fill material into navigable waters;

(E) for the purpose of construction or maintenance of farm roads or forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained, in accordance with best management practices, to assure that flow and circulation patterns and chemical and biological characteristics of the navigable waters are not impaired, that the reach of the navigable waters is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized;

(F) resulting from any activity with respect to which a State has an approved program under section 1288(b)(4) of this title which meets the requirements of subparagraphs (B) and (C) of such section, is not prohibited by or otherwise subject to regulation under this section or section 1311(a) or 1342 of this title (except for effluent standards or prohibitions under section 1317 of this title).

(2) Any discharge of dredged or fill material into the navigable waters incidental to any activity having as its purpose bringing an area of the navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be impaired or the reach of such waters be reduced, shall be required to have a permit under this section.

#### **State administration**

(g)(1) The Governor of any State desiring to administer its own individual and general permit program for the discharge of dredged or fill material into the navigable waters (other than those waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport in-

terstate or foreign commerce shoreward to their ordinary high water mark, including all waters which are subject to the ebb and flow of the tide shoreward to their mean high water mark, or mean higher high water mark on the west coast, including wetlands adjacent thereto) within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program.

(2) Not later than the tenth day after the date of the receipt of the program and statement submitted by any State under paragraph (1) of this subsection, the Administrator shall provide copies of such program and statement to the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service.

(3) Not later than the nineteenth day after the date of the receipt by the Administrator of the program and statement submitted by any State, under paragraph (1) of this subsection, the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, shall submit any comments with respect to such program and statement to the Administrator in writing.

**Determination of State's authority to issue permits  
under State program; approval;  
notification; transfers to State program**

(h)(1) Not later than the one-hundred-twentieth day after the date of the receipt by the Administrator of a program and statement submitted by any State under paragraph (1) of this subsection, the Administrator shall deter-



mine, taking into account any comments submitted by the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, pursuant to subsection (g) of this section, whether such State has the following authority with respect to the issuance of permits pursuant to such program:

(A) To issue permits which—

(i) apply, and assure compliance with, any applicable requirements of this section, including, but not limited to, the guidelines established under subsection (b)(1) of this section, and sections 1317 and 1343 of this title;

(ii) are for fixed terms not exceeding five years, and

(iii) can be terminated or modified for cause including, but not limited to, the following:

(I) violation of any condition of the permit;

(II) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(III) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

(B) To issue permits which apply, and assure compliance with, all applicable requirements of section 1318 of this title, or to inspect, monitor, enter, and require reports to at least the same extent as required in section 1318 of this title.

(C) To assure that the public, and any other State the waters of which may be affected, received notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application.

(D) To assure that the Administrator receives notice of each application (including a copy thereof) for a permit.

(E) To assure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing.

(F) To assure that no permit will be issued if, in the judgment of the Secretary, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby.

(G) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement.

(H) To assure continued coordination with Federal and Federal-State water-related planning and review processes.

(2) If, with respect to a State program submitted under subsection (g)(1) of the section, the Administrator determines that such State—

(A) has the authority set forth in paragraph (a) of this subsection, the Administrator shall approve the program and so notify (i) such State and (ii) the Secretary, who upon subsequent notification from such State that it is administering such program, shall suspend the issuance of permits under subsections (a) and (e) of this section for activities with respect to which a permit may be issued pursuant to such State program; or

(B) does not have the authority set forth in paragraph (1) of this subsection, the Administrator shall

so notify such State, which notification shall also describe the revisions or modifications necessary so that such State may resubmit such program for a determination by the Administrator under this subsection.

(3) If the Administrator fails to make a determination with respect to any program submitted by a State under subsection (g)(1) of this section within one-hundred-twenty days after the date of the receipt of such program, such program shall be deemed approved pursuant to paragraph (2)(A) of this subsection and the Administrator shall so notify such State and the Secretary who, upon subsequent notification from such State that it is administering such program, shall suspend the issuance of permits under subsection (a) and (e) of this section for activities with respect to which a permit may be issued by such State.

(4) After the Secretary receives notification from the Administrator under paragraph (2) or (3) of this subsection that a State permit program has been approved, the Secretary shall transfer any applications for permits pending before the Secretary for activities with respect to which a permit may be issued pursuant to such State program to such State for appropriate action.

(5) Upon notification from a State with a permit program approved under this subsection that such State intends to administer and enforce the terms and conditions of a general permit issued by the Secretary under subsection (e) of this section with respect to activities in such State to which such general permit applies, the Secretary shall suspend the administration and enforcement of such general permit with respect to such activities.

#### **Withdrawal of approval**

(i) Whenever the Administrator determines after public hearing that a State is not administering a program approved under section (h)(2)(A) of this section, in accordance with this section, including, but not limited to, the guidelines established under subsection (b)(1) of this section, the

Administrator shall so notify the State, and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days after the receipt of such notification, the Administrator shall (1) withdraw approval of such program until the Administrator determines such corrective action has been taken, and (2) notify the Secretary that the Secretary shall resume the program for the issuance of permits under subsections (a) and (e) of this section for activities with respect to which the State was issuing permits and that such authority of the Secretary shall continue in effect until such time as the Administrator makes the determination described in clause (1) of this subsection and such State again has an approved program.

**Copies of applications for State permits and proposed general permits to be transmitted to Administrator**

(j) Each State which is administering a permit program pursuant to this section shall transmit to the Administrator (1) a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State, and (2) a copy of each proposed general permit which such State intends to issue. Not later than the tenth day after the date of the receipt of such permit application or such proposed general permit, the Administrator shall provide copies of such permit application or such proposed general permit to the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service. If the Administrator intends to provide written comments to such State with respect to such permit application or such proposed general permit, he shall so notify such State not later than the thirtieth day after the date of the receipt of such application of such proposed general permit and provide such written comments to such State, after consideration of any comments made in writing with respect to such application of such proposed general permit by

the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, not later than the ninetieth day after the date of such receipt. If such State is so notified by the Administrator, it shall not issue the proposed permit until after receipt of such comments from the Administrator, or after such ninetieth day, whichever first occurs. Such State shall not issue such proposed permit after such ninetieth day if it has received such written comments in which the Administrator objects (A) to the issuance of such proposed permit and such proposed permit is one that has been submitted to the Administrator pursuant to subsection (h)(1)(E) of this section, or (B) to the issuance of such proposed permit as being outside the requirements of this section, including, but not limited to, the guidelines developed under subsection (b)(1) of this section unless it modifies such proposed permit in accordance with such comments. Whenever the Administrator objects to the issuance of a permit under the preceding sentence such written objection shall contain a statement of the reasons for such objection and the conditions which such permit would include if it were issued by the Administrator. In any case where the Administrator objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator of such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing or, if no hearing is requested within 90 days after the date of such objection, the Secretary may issue the permit pursuant to subsection (a) or (e) of this section, as the case may be, for such source in accordance with the guidelines and requirements of this chapter.

#### Waiver

(k) In accordance with guidelines promulgated pursuant to subsection (i)(2) of section 1314 of this title, the Administrator is authorized to waive the requirements of subsection (j) of this section at the time of the approval of a program pursuant to subsection (h)(2)(A) of this sec-



tion for any category (including any class, type, or size within such category) of discharge within the State submitting such program.

**Categories of discharges not subject to requirements**

(l) The Administrator shall promulgate regulations establishing categories of discharges which he determines shall not be subject to the requirements of subsection (j) of this section in any State with a program approved pursuant to subsection (h)(2)(A) of this section. The Administrator may distinguish among classes, types, and sizes within any category of discharges.

**Comments on permit applications or proposed general permits by Secretary of Interior acting through Director of United States Fish and Wildlife Service**

(m) Not later than the ninetieth day after the date on which the Secretary notifies the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service that (1) an application for a permit under subsection (a) of this section has been received by the Secretary, or (2) the Secretary proposes to issue a general permit under subsection (e) of this section, the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, shall submit any comments with respect to such application or such proposed general permit in writing to the Secretary.

**Enforcement authority not limited**

(n) Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 1319 of this title.

**Public availability of permits and permit applications**

(o) A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or portion thereof, shall further be available on request for the purpose of reproduction.

**Compliance**

(p) Compliance with a permit issued pursuant to this section, including any activity carried out pursuant to a general permit issued under this section, shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1317, and 1343 of this title.

**Minimization of duplication, needless paperwork,  
and delays in issuance; agreements**

(q) Not later than the one-hundred-eightieth day after December 27, 1977, the Secretary shall enter into agreements with the Administrator, the Secretaries of the Departments of Agriculture, Commerce, Interior, and Transportation, and the heads of other appropriate Federal agencies to minimize, to the maximum extent practicable, duplication, needless paperwork, and delays in the issuance of permits under this section. Such agreements shall be developed to assure that, to the maximum extent practicable, a decision with respect to an application for a permit under subsection (a) of this section will be made not later than the ninetieth day after the date of notice for such application is published under subsection (a) of this section.

**Federal projects specifically authorized by Congress**

(r) The discharge of dredged or fill material as part of the construction of a Federal project specifically authorized by Congress, whether prior to or on or after December 27, 1977, is not prohibited by or otherwise subject to regulation under this section, or a State program approved under this section, or section 1311(a) or 1342 of this title (except for effluent standards or prohibitions under section 1317 of this title), if information on the effects of such discharge, including consideration of the guidelines developed under subsection (b)(1) of this section, is included in an environmental impact statement for such project pursuant to the National Environmental Policy Act of 1969 and such environmental impact statement has been submitted to Congress before the actual

discharge of dredged or fill material in connection with the construction of such project and prior to either authorization of such project or an appropriation of funds for such construction.

### **Violation of permits**

(s)(1) Whenever on the basis of any information available to him the Secretary finds that any person is in violation of any condition or limitation set forth in a permit issued by the Secretary under this section, the Secretary shall issue an order requiring such person to comply with such condition or limitation, or the Secretary shall bring a civil action in accordance with paragraph (3) of this subsection.

(2) A copy of any order issued under this subsection shall be sent immediately by the Secretary to the State in which the violation occurs and other affected States. Any order issued under this subsection shall be by personal service and shall state with reasonable specificity the nature of the violation, specify a time for compliance, not to exceed thirty days, which the Secretary determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. In any case in which an order under this subsection is issued to a corporation, a copy of such order shall be served on any appropriate corporate officers.

(3) The Secretary is authorized to commence a civil action for appropriate relief, including a permanent or temporary injunction for any violation for which he is authorized to issue a compliance order under paragraph (1) of this subsection. Any action under this paragraph may be brought in the district court of the United States for the district in which the defendant is located or resides or is doing business, and such court shall have jurisdiction to restrain such violation and to require compliance. Notice of the commencement of such action shall be given immediately to the appropriate State.

(4)(A) Any person who willfully or negligently violates any condition or limitation in a permit issued by the Secretary under this section shall be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or by both. If the conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two years, or both.

(B) For the purposes of this paragraph, the term "person" shall mean, in addition to the definition contained in section 1362(5) of this title, any responsible corporate officer.

(5) Any person who violates any condition or limitation in a permit issued by the Secretary under this section, and any person who violates any order issued by the Secretary under paragraph (1) of this subsection, shall be subject to a civil penalty not to exceed \$10,000 per day of such violation.

#### **Navigable waters within State jurisdiction**

(t) Nothing in this section shall preclude or deny the right of any State or interstate agency to control the discharge of dredged or fill material in any portion of the navigable waters within the jurisdiction of such State, including any activity of any Federal agency, and each such agency shall comply with such State or interstate requirements both substantive and procedural to control the discharge of dredged or fill material to the same extent that any person is subject to such requirements. This section shall not be construed as affecting or impairing the authority of the Secretary to maintain navigation.

\* \* \*

**§1364.[504] Emergencies****Emergency powers**

(a) Notwithstanding any other provision of this chapter, the Administrator upon receipt of evidence that a pollution source or combination of sources is presenting an imminent and substantial endangerment to the health of persons or to the welfare of persons where such endangerment is to the livelihood of such persons, such as inability to market shellfish, may bring suit on behalf of the United States in the appropriate district court to immediately restrain any person causing or contributing to the alleged pollution to stop the discharge of pollutants causing or contributing to such pollution or to take such other action as may be necessary.

\* \* \*

**§1365.[505] Citizen suits****Authorization; jurisdiction**

(a) Except as provided in subsection (b) of this section, any citizen may commence a civil action on his own behalf —

(a) against any person . . . who is alleged to be in violation of (A) and effluent standard or limitation under this chapter or (B) an order issued by the Administrator or a State with respect to such a standard or limitation, or

(2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator.

\* \* \*

**Venue; intervention by Administrator**

(c)(1) Any action respecting a violation by a discharge source of an effluent standard or limitation or an order respecting such standard or limitation may be brought



under this section only in the judicial district in which such source is located.

\* \* \*

**Statutory or common law rights not restricted**

(e) Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a State agency).

\* \* \*

**Civil action by State Governors**

(h) A Governor of a State may commence a civil action under subsection (a) of this section, without regard to the limitations of subsection (b) of this section, against the Administrator where there is alleged a failure of the Administrator to enforce an effluent standard or limitation under this chapter the violation of which is occurring in another State and is causing an adverse effect on the public health or welfare in his State, or is causing a violation of any water quality requirement in his State.

\* \* \*

**§1369.[509] Administrative procedure and judicial review**

\* \* \*

**Review of Administrator's actions**

(b)(1) Review of the Administrator's action (A) in promulgating any standard of performance under section 1316 of this title, (B) in making any determination pursuant to section 1316(b)(1)(C) of this title, (C) in promulgating any effluent standard, prohibition, or pretreatment standard under section 1317 of this title, (D) in making any determination as to a State permit program submitted

under section 1342(b) of this title, (E) in approving or promulgating any effluent limitation or other limitation under section 1311, 1312, or 1316 of this title, and (F) in issuing or denying any permit under section 1342 of this title, may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts such business upon application by such person. Any such application shall be made within ninety days from the date of such determination, approval, promulgation, issuance or denial, or after such date only if such application is based solely on grounds which arose after such ninetieth day.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) of this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement.

\* \* \*

#### **§1370.[510] State authority**

Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard of limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this chapter; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

U-1

## APPENDIX U

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Ill. Rev. Stat. ch. 111½

### 1012. Acts prohibited

§12. No person shall:

(a) Cause or threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources, or so as to violate regulations or standards adopted by the Pollution Control Board under this Act;

\* \* \*

